



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

September 21, 2012

WELL WORK PERMIT

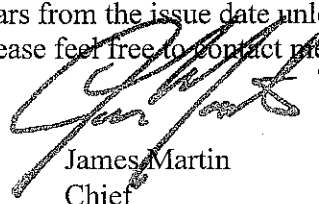
Re-Work

This permit, API Well Number: 47-9501964, issued to SANCHO OIL & GAS CORPORATION, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Please be advised that form WR-35, well operators report of well work, is to be submitted to this office within 90 days of completion of drilling, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

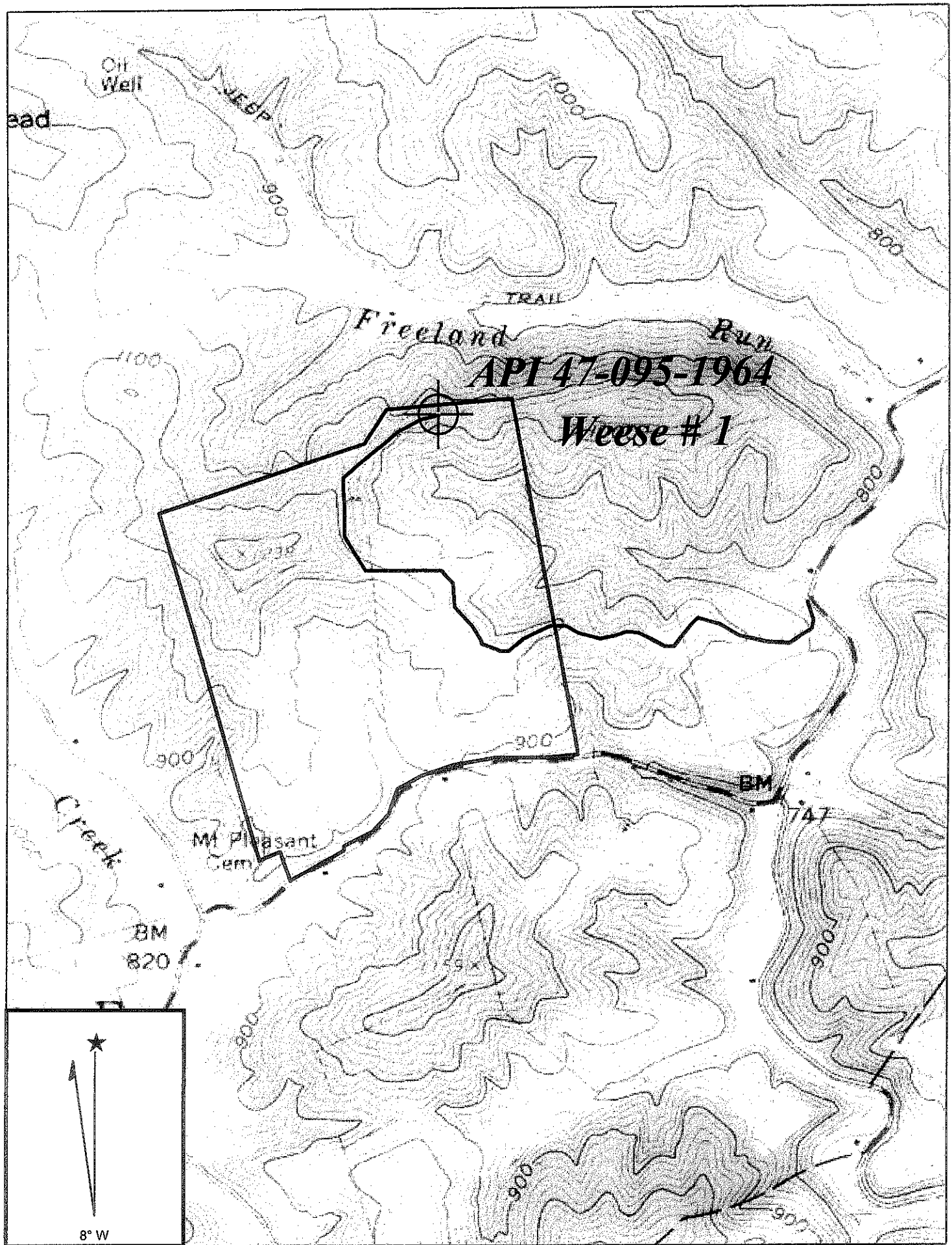
Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.



James Martin
Chief

Operator's Well No: WEESE 1
Farm Name: WEESE, ROGER R.
API Well Number: 47-9501964
Permit Type: Re-Work
Date Issued: 09/21/2012

Promoting a healthy environment.



Copyright (C) 1997, Maptech, Inc.

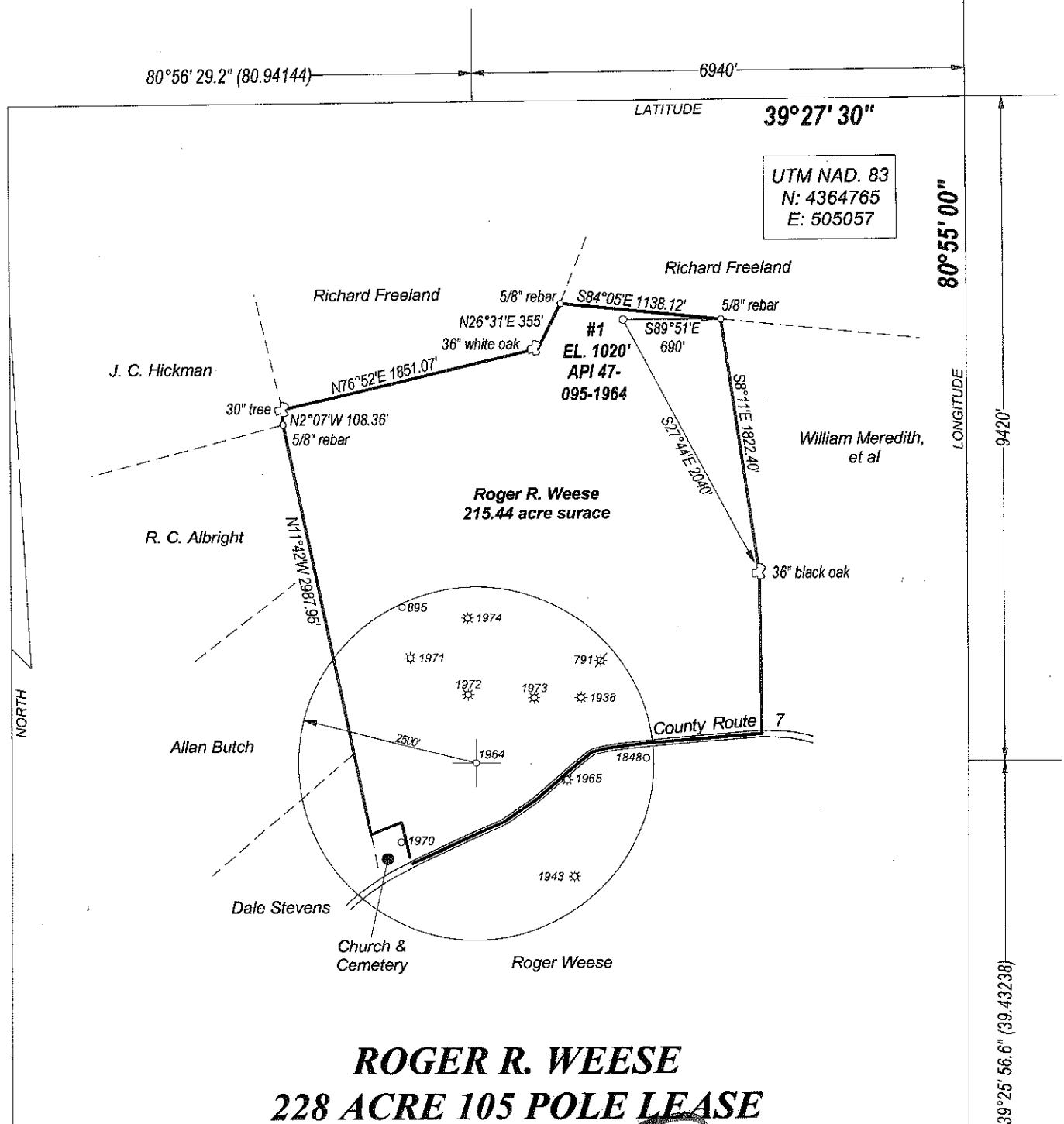
MIDDLEBOURNE QUADRANGLE

SCALE 1" = 1000'

SANCHO OIL & GAS

WELL: WEESE #1 · API 47-095-1964
ROGER R. WEESE 110 ACRE (EAST PART)
OF 228 ACRE 105 POLE LEASE

MEADE DISTRICT TYLER COUNTY WEST VIRGINIA

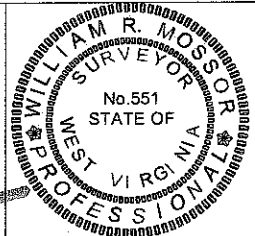


FILE NO. _____
DRAWING NO. _____
SCALE 1" = 1000'
MINIMUM DEGREE
OF ACCURACY 1:200
PROVEN SOURCE
OF ELEVATION WEESE #1
API 47-095-1964

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS
PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE
AND BELIEF AND SHOWS ALL THE INFORMATION
REQUIRED BY LAW AND THE REGULATIONS ISSUED
AND PRESCRIBED BY THE DEPARTMENT OF ENERGY.

(SIGNED)

PROFESSIONAL SURVEYOR: 551



STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY
DIVISION OF OIL AND GAS

DATE MAY 25TH, 2012
OPERATORS WELL NO. WEESE #1

API 47 - 095 - 1964
STATE COUNTY PERMIT

WELL TYPE: OIL ☒ GAS ☒ LIQUID INJECTION _____ WASTE DISPOSAL _____
(IF GAS) PRODUCTION ☒ STORAGE _____ DEEP _____ SHALLOW ☒

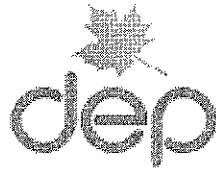
LOCATION: ELEVATION 1020' WATER SHED SANCHO CREEK & FREELAND RUN
DISTRICT MEADE COUNTY TYLER QUADRANGLE MIDDLEBOURNE

SURFACE OWNER ROGER R. WEESE ACREAGE 215.44
OIL & GAS ROYALTY ROGER R. WEESE LEASE AC. 228 AC. 105 PO.

PROPOSED WORK: DRILL _____ CONVERT _____ DRILL DEEPER _____ REDRILL _____
FRACTURE OR STIMULATE _____ PLUG OFF OLD FORMATION _____
PERFORATE NEW FORMATION ☒
OTHER PHYSICAL CHANGE IN WELL PERFORATE 4 1/2" TO ALLOW OIL TO DRAIN INTO 4 1/2"
PLUG AND ABANDON _____ CLEAN OUT AND REPLUG _____

TARGET FORMATION SQUAW ESTIMATED DEPTH 1900'

WELL OPERATOR SANCHO OIL & GAS DESIGNATED AGENT LOREN BAGLEY
ADDRESS P. O. BOX 175 ADDRESS P. O. BOX 175
ST. MARYS, WV 26170 ST. MARYS, WV 26170



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
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Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

September 21, 2012

WELL WORK PERMIT

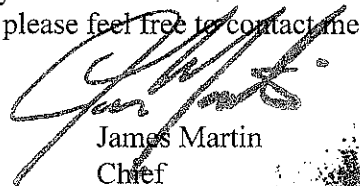
Vertical Well

This permit, API Well Number: 47-9703843, issued to MOUNTAIN V OIL & GAS, INC., is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Please be advised that form WR-35, well operators report of well work, is to be submitted to this office within 90 days of completion of drilling, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.


James Martin
Chief

Operator's Well No: HAYDEN MORGAN 2 WV0446

Farm Name: H. HAYDEN MORGAN, ET UX

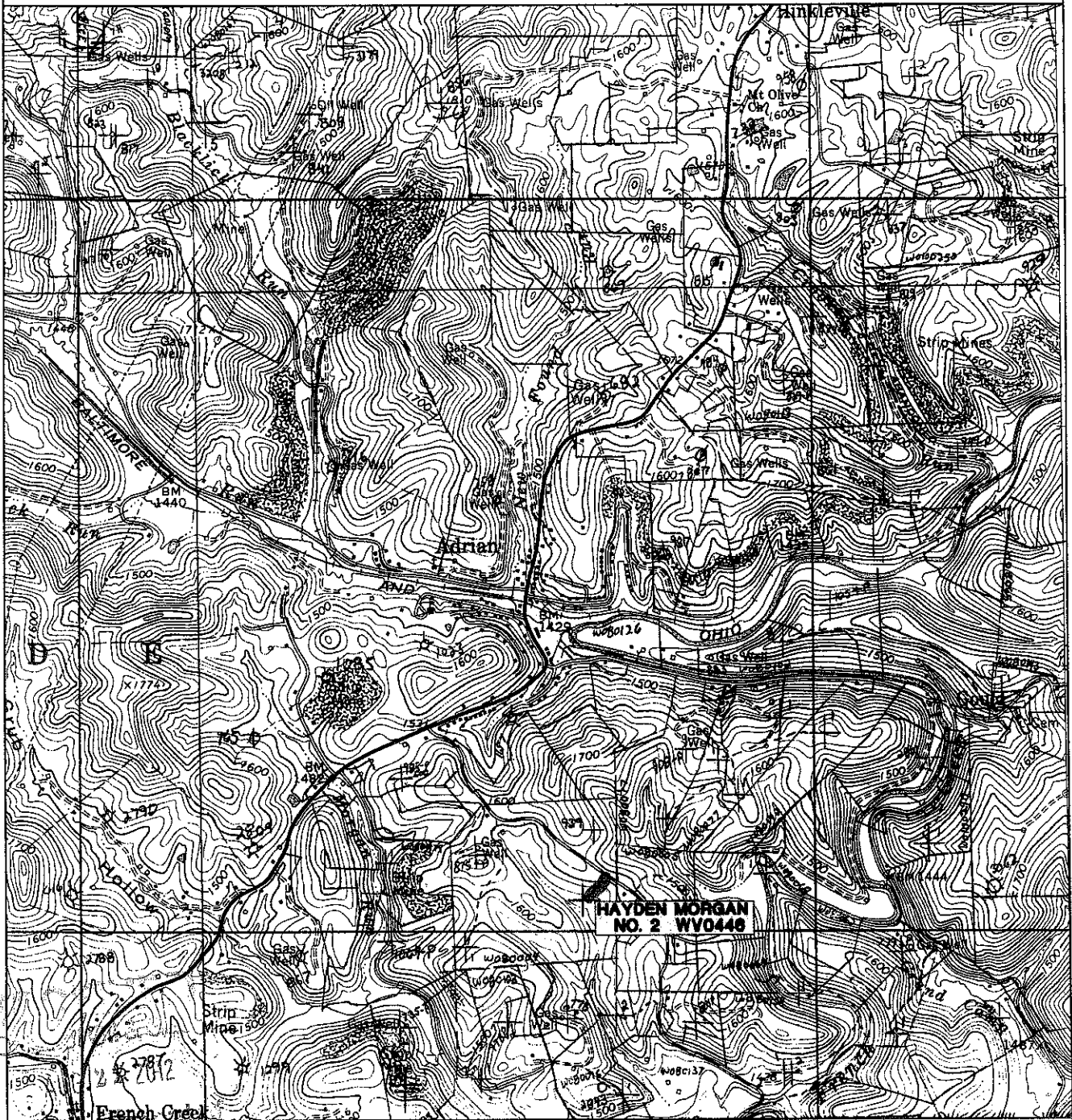
API Well Number: 47-9703843

Permit Type: Vertical Well

Date Issued: 09/21/2012

Promoting a healthy environment.

HAYDEN MORGAN #2 WV0446



ANGLE RIGHT LAND SURVEYING, LLC PO BOX 881 GRANTSVILLE, WV 26147 (304) 354-0085 W08004	OPERATOR	TOPO SECTION	WELL NAME
	MOUNTAIN V OIL & GAS, INC.	ADRIAN	HAYDEN MORGAN #2 WV0446
	P.O. BOX 470	SCALE:	DATE:
	BRIDGEPORT, WV 26330	1"=2000'	07/07/2012



west virginia department of environmental protection

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Randy C. Huffman, Cabinet Secretary
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September 21, 2012

WELL WORK PERMIT

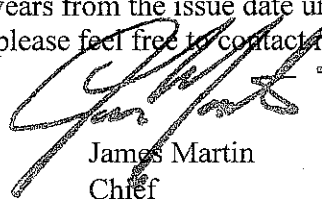
Vertical Well

This permit, API Well Number: 47-103283, issued to ANJA RESOURCES, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

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James Martin
Chief

Operator's Well No: DICE 1

Farm Name: DICE, GLEN D. AND CATHERINE

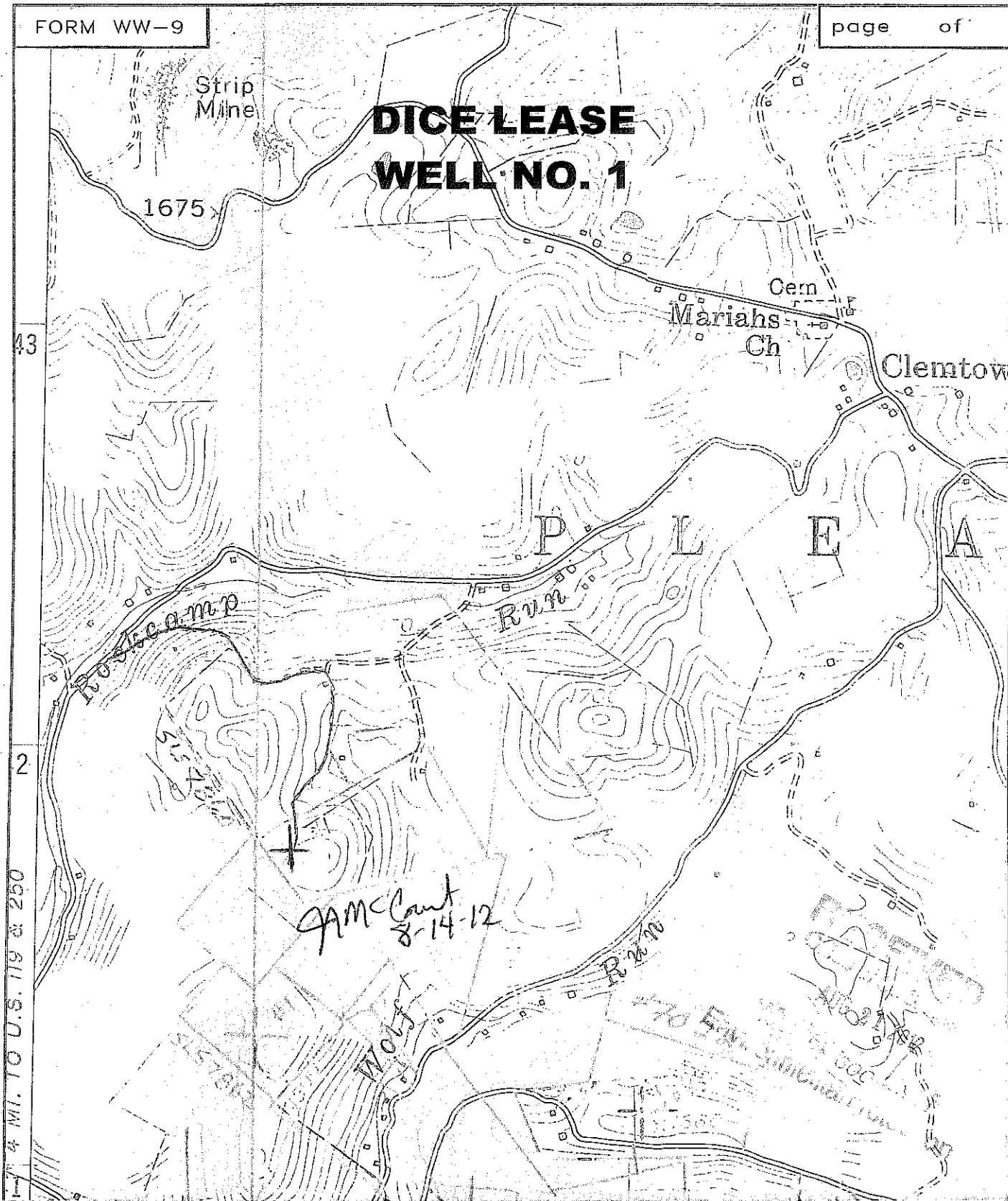
API Well Number: 47-103283

Permit Type: Vertical Well

Date Issued: 09/21/2012

Promoting a healthy environment.

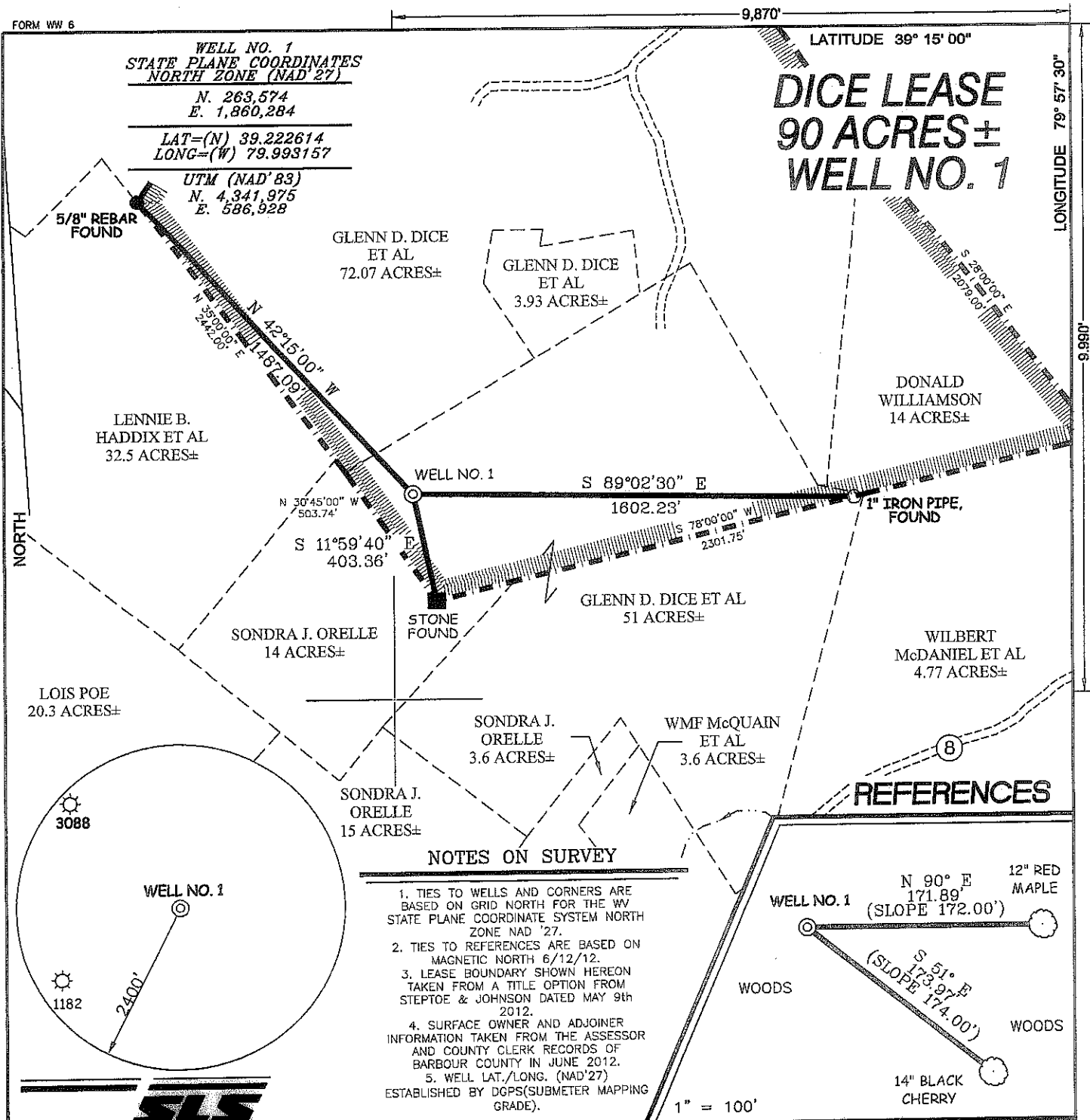
**DICE LEASE
WELL NO. 1**



SMITH LAND SURVEYING
P.O. BOX 150 GLENVILLE, WV. 26351

TOPO SECTION OF NESTORVILLE 7.5'

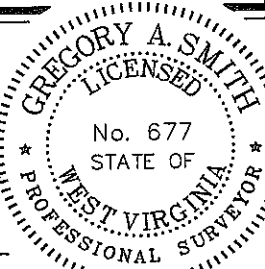
FILE NO. 7860 DATE 8/7/12 SCALE 1"=1000' REVISED



I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DIVISION OF ENVIRONMENTAL PROTECTION.

P.S.
677

Gregory A. Smith



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

DATE JULY 02 , 20 12

REVISED DATE SEPTEMBER 13 , 20 12

OPERATORS WELL NO. DICE No. 1

API WELL NO. 47 - 001 - 03243

STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/200 FILE NO. 7860P1 (418-30)

PROVEN SOURCE OF ELEVATION DGPS (SUBMETER MAPPING GRADE) SCALE 1" = 500'

STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS



WELL TYPE: OIL GAS ☒ LIQUID INJECTION WASTE DISPOSAL IF "GAS" PRODUCTION ☒ STORAGE DEEP SHALLOW ☒

LOCATION: ELEVATION 1,658' WATERSHED ROCKCAMP RUN OF MITCHELL RUN OF TYGART RIVER

DISTRICT PLEASANTS COUNTY BARBOUR QUADRANGLE NESTORVILLE 7.5'

SURFACE OWNER GLEN D. AND CATHERINE M. DICE ACREAGE 51±

ROYALTY OWNER RODERICK F. AND SUSAN M. TETRICK, ET AL LEASE ACREAGE 90±

PROPOSED WORK: LEASE NO.

DRILL ☒ CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE ☒ PLUG OFF OLD

FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER

PHYSICAL CHANGE IN WELL (SPECIFY) TARGET FORMATION BENSON/ELK

ESTIMATED DEPTH 5,050'

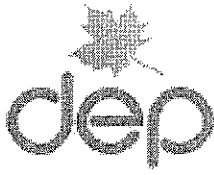
WELL OPERATOR ANJA RESOURCES DESIGNATED AGENT JONNIE ROMINGER

ADDRESS 12 MILLBROOK ROAD ADDRESS 12 MILLBROOK ROAD

BRIDGEPORT, WV 26330 BRIDGEPORT, WV 26330

COUNTY NAME

PERMIT



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

September 20, 2012

WELL WORK PERMIT

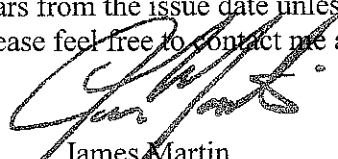
Vertical Well

This permit, API Well Number: 47-103282, issued to ANJA RESOURCES, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

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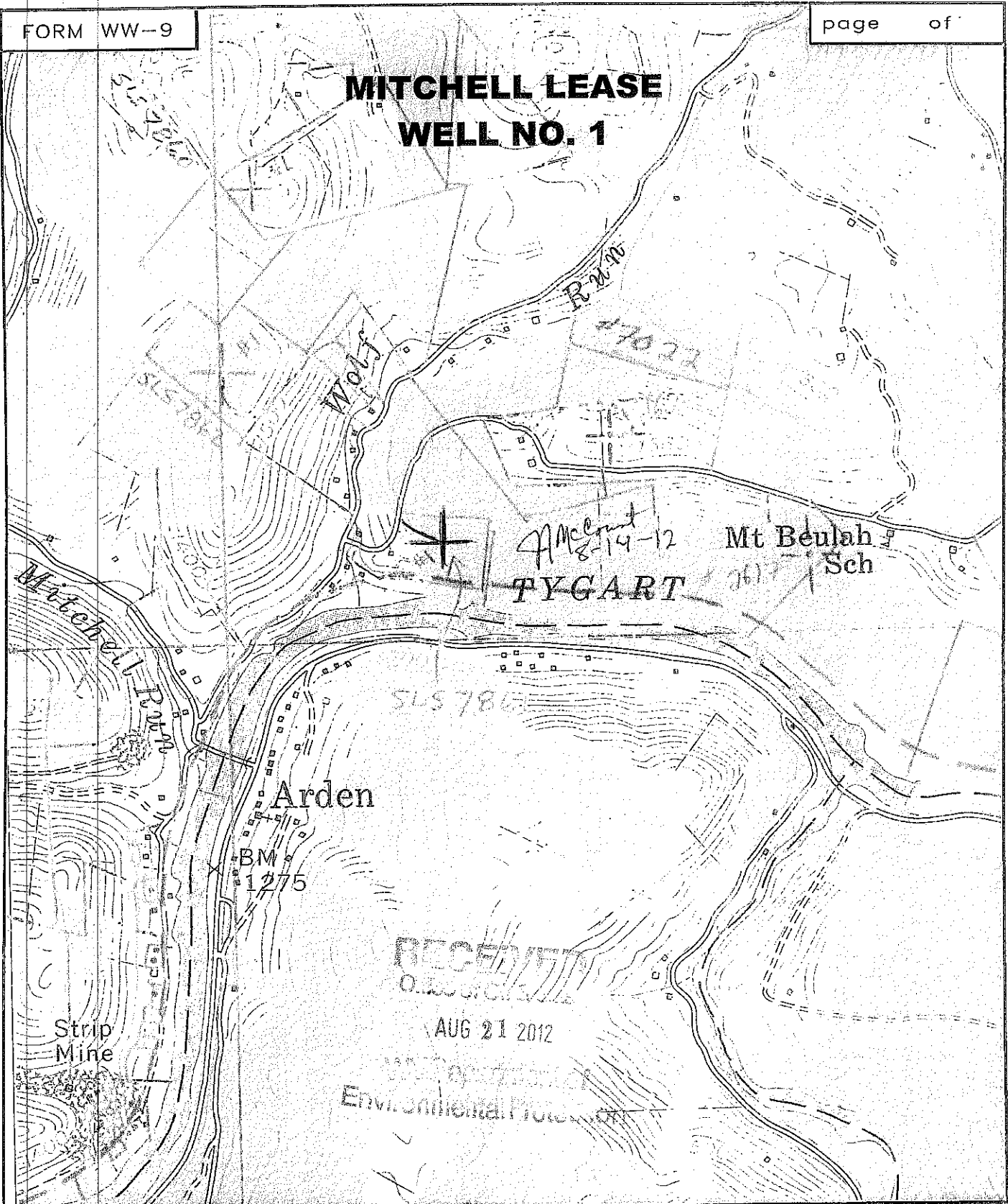


James Martin
Chief

Operator's Well No: MITCHELL 1
Farm Name: MITCHELL, BRUCE L. AND WILL
API Well Number: 47-103282
Permit Type: Vertical Well
Date Issued: 09/20/2012

Promoting a healthy environment.

**MITCHELL LEASE
WELL NO. 1**



SLS

SMITH LAND SURVEYING
P.O. BOX 150 GLENVILLE, WV. 26351

TOPO SECTION OF NESTORVILLE 7.5'

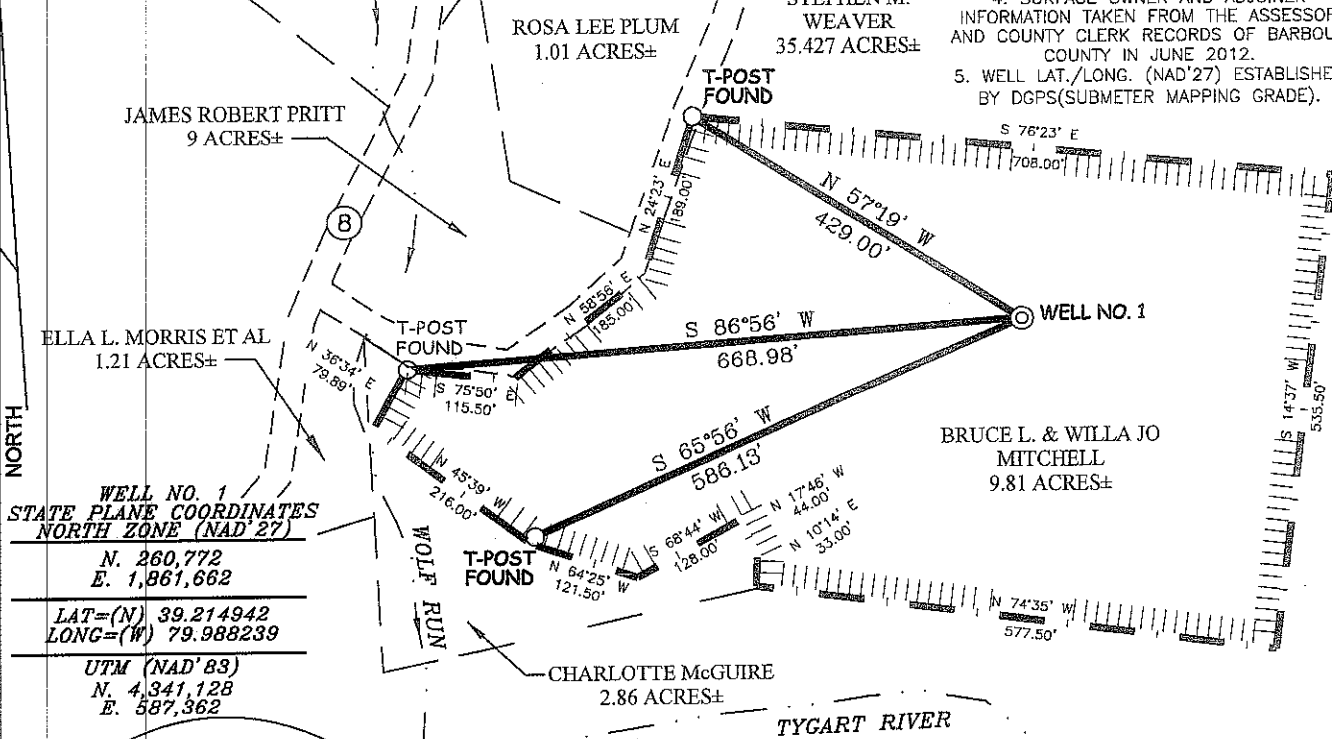
FILE NO. 7861 DATE 7/10/12 SCALE 1"=1000'

MITCHELL LEASE 9.81 ACRES± WELL NO. 1

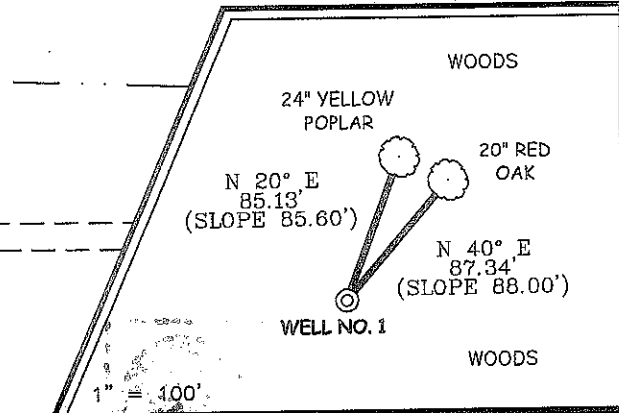
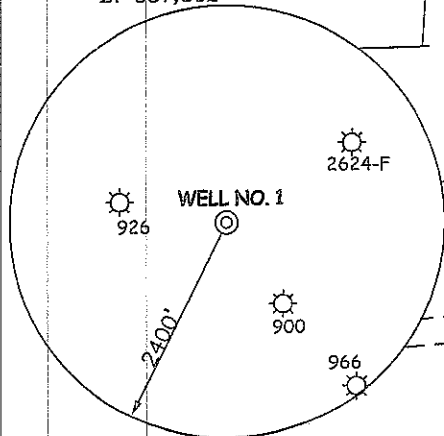
1. TIES TO WELLS AND CORNERS ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM NORTH ZONE NAD '27.
2. TIES TO REFERENCES ARE BASED ON MAGNETIC NORTH 6/21/12.
3. LEASE BOUNDARY SHOWN HEREON TAKEN FROM A DEED BOOK 443 AT PAGE 129.
4. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF BARBOUR COUNTY IN JUNE 2012.
5. WELL LAT./LONG. (NAD'27) ESTABLISHED BY DGPS(SUBMETER MAPPING GRADE).

LONGITUDE 79° 57' 30"

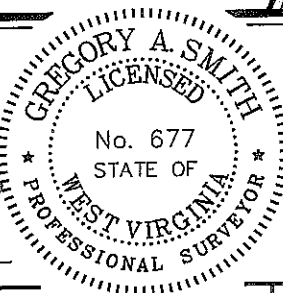
12,780'



REFERENCES



I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DIVISION OF ENVIRONMENTAL PROTECTION.

P.S.
677*Gregory A. Smith*

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

DATE JULY 10, 20 12REVISED DATE SEPTEMBER 13, 20 12OPERATORS WELL NO. MITCHELL No. 1API WELL NO. 47 - 001 - 03292STATE COUNTY PERMIT MINIMUM DEGREE
OF ACCURACY

1 / 200

FILE NO. 7861P1 (418-32)SCALE 1" = 200'PROVEN SOURCE
OF ELEVATION

DGPS (SUBMETER MAPPING GRADE)

STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS



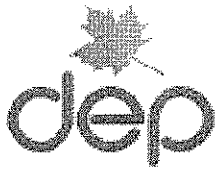
WELL TYPE: OIL	<input type="checkbox"/>	GAS	<input checked="" type="checkbox"/>	LIQUID INJECTION	<input type="checkbox"/>	WASTE DISPOSAL	<input type="checkbox"/>	IF "GAS" PRODUCTION	<input checked="" type="checkbox"/>	STORAGE	<input type="checkbox"/>	DEEP	<input type="checkbox"/>	SHALLOW	<input checked="" type="checkbox"/>	
LOCATION:																
ELEVATION	1,384'			WATERSHED TYGART RIVER												
DISTRICT	PLEASANTS			COUNTY	BARBOUR			QUADRANGLE	NESTORVILLE 7.5'							
SURFACE OWNER	BRUCE L. AND WILLA JO MITCHELL										ACREAGE	9.81±				
ROYALTY OWNER	BRUCE L. AND WILLA JO MITCHELL										LEASE ACREAGE	9.81±				
PROPOSED WORK:																
DRILL	<input checked="" type="checkbox"/>	CONVERT	<input type="checkbox"/>	DRILL DEEPER	<input type="checkbox"/>	REDRILL	<input type="checkbox"/>	FRACTURE OR STIMULATE	<input checked="" type="checkbox"/>	PLUG OFF OLD						
FORMATION	PERFORATE NEW FORMATION										PLUG AND ABANDON	<input type="checkbox"/>	CLEAN OUT AND REPLUG	<input type="checkbox"/>	OTHER	<input type="checkbox"/>
PHYSICAL CHANGE IN WELL (SPECIFY)										TARGET FORMATION	BENSON / ELK					
										ESTIMATED DEPTH	5,050'					

WELL OPERATOR ANJA RESOURCES
ADDRESS 12 MILLBROOK ROAD
BRIDGEPORT, WV 26330

DESIGNATED AGENT JONNIE ROMINGER
ADDRESS 12 MILLBROOK ROAD
BRIDGEPORT, WV 26330

COUNTY NAME

PERMIT



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

September 21, 2012

WELL WORK PERMIT

Horizontal 6A Well

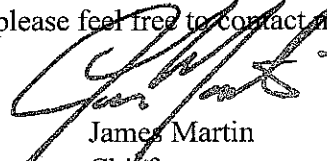
This permit, API Well Number: 47-900150, issued to CHESAPEAKE APPALACHIA, L.L.C., is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto.

Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

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James Martin
Chief

Operator's Well No: NICKOLES 3 LLC BRK 8H
Farm Name: NICKOLES, GREGORY D. & RAN

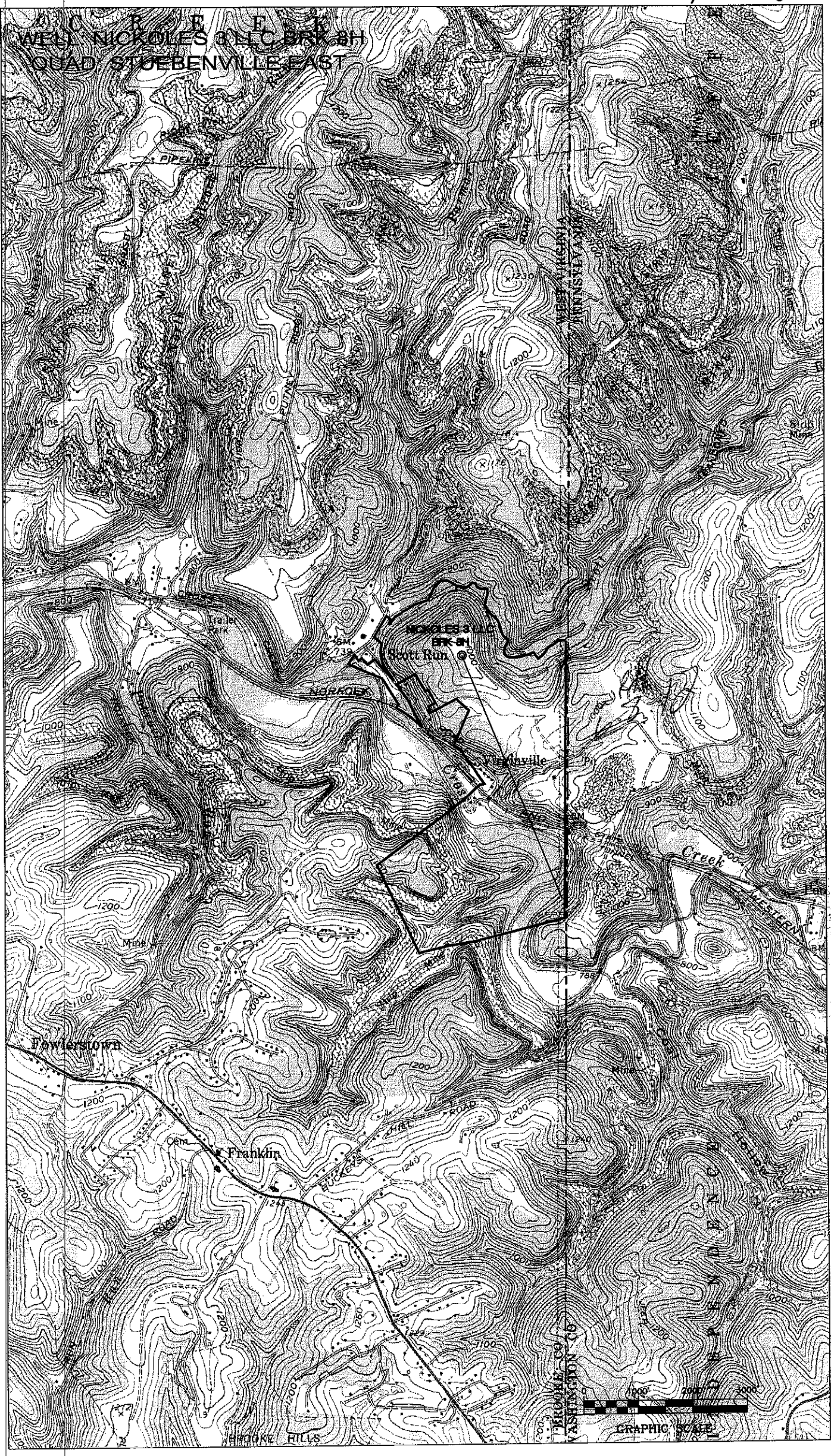
API Well Number: 47-900150

Permit Type: Horizontal 6A Well

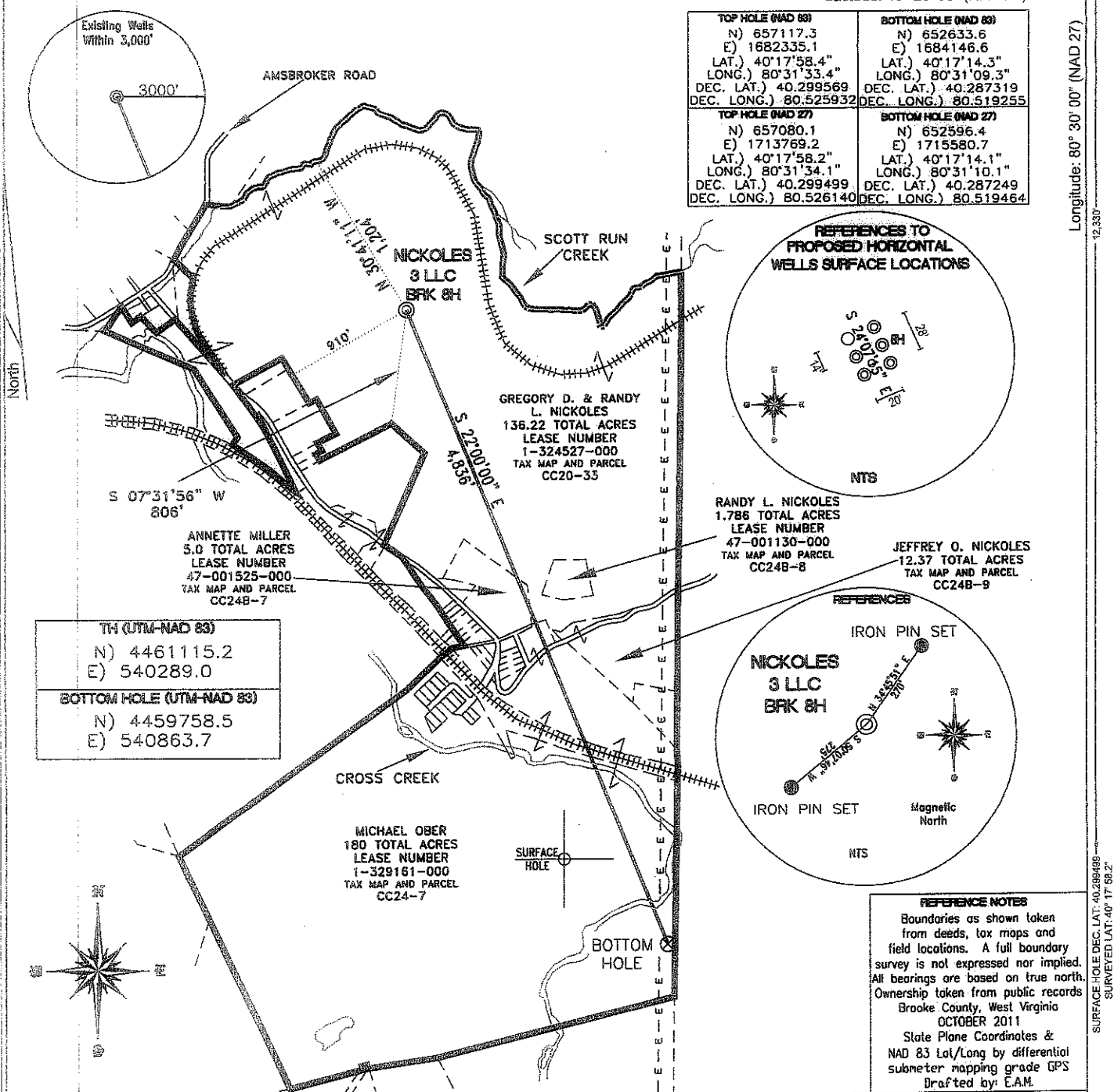
Date Issued: 09/21/2012

Promoting a healthy environment.

9-00150



General Publication



FILE #: CHE 097

DRAWING #: 1869

SCALE: 1" = 1000'

MINIMUM DEGREE

OF ACCURACY: 1/200

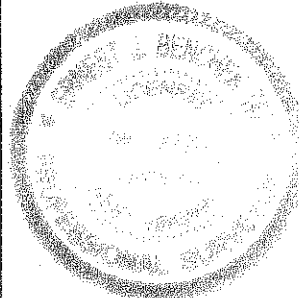
PROVEN SOURCE SUBMETER MAPPING

OF ELEVATION: GRADE GPS

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

Signed:

L.L.S. #2124 : Ernest J. Benchek III



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP

OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25304

Well Type: ☐ Oil ☐ Waste Disposal ☐ Production ☐ Deep
☒ Gas ☐ Liquid Injection ☐ Storage ☒ Shallow

WATERSHED: UPPER OHIO SOUTH

ELEVATION: 1,000'

COUNTY/DISTRICT: BROOKE/CROSS CREEK

QUADRANGLE: STUEBENVILLE EAST

SURFACE OWNER: GREGORY D. & RANDY L. NICKOLES

ACREAGE: 136.22 +/-

OIL & GAS ROYALTY OWNER: GREGORY D. & RANDY L. NICKOLES

ACREAGE: 321.22 +/-

LEASE NUMBERS:

DRILL ☒ CONVERT ☐ DRILL DEEPER ☐ REDRILL ☐ FRACTURE OR STIMULATE ☒
PLUG OFF FORMATION ☐ PERFORATE NEW FORMATION ☐ PLUG & ABANDON ☐
CLEAN OUT & REPLUG ☐ OTHER CHANGE ☐ (SPECIFY):

TARGET FORMATION: MARCELLUS

ESTIMATED DEPTH: TVD: 5,625' TMD: 10,256'

WELL OPERATOR: CHESAPEAKE APPALACHIA, LLC.

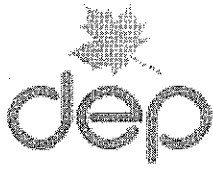
DESIGNATED AGENT: ERIC GILLESPIE

ADDRESS: PO BOX 18496

ADDRESS: PO BOX 6070

CITY: OKLAHOMA CITY STATE: OK ZIP CODE: 73154-0496

CITY: CHARLESTON STATE: WV ZIP CODE: 25362



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

September 20, 2012

WELL WORK PERMIT

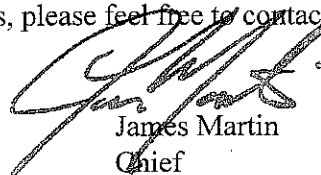
Vertical Well

This permit, API Well Number: 47-103281, issued to ANJA RESOURCES, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Please be advised that form WR-35, well operators report of well work, is to be submitted to this office within 90 days of completion of drilling, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.



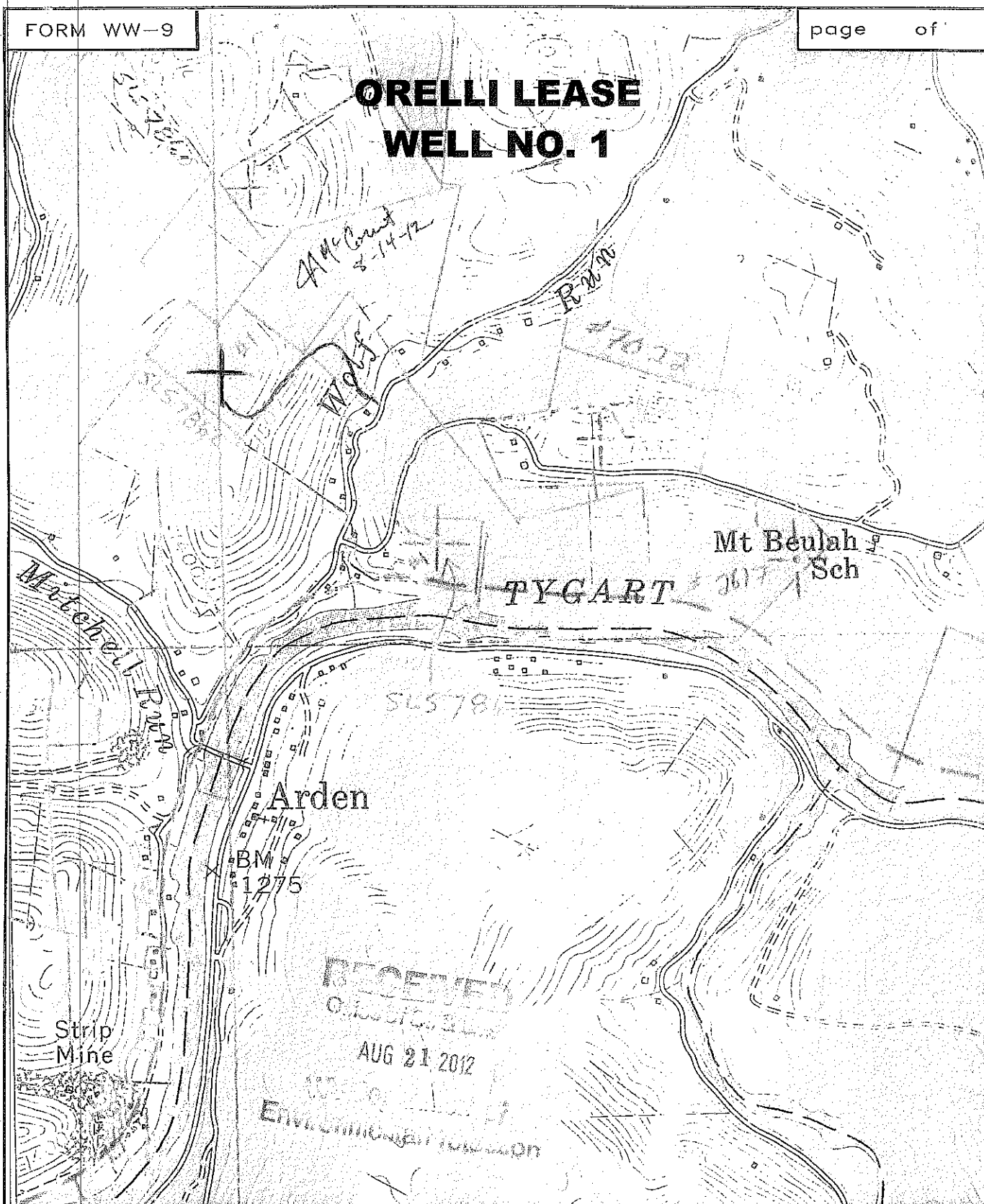
James Martin
Chief

Operator's Well No: ORELLI 1
Farm Name: ORELLI, SONDRAL.
API Well Number: 47-103281
Permit Type: Vertical Well
Date Issued: 09/20/2012

Promoting a healthy environment.

page of

ORELLI LEASE
WELL NO. 1



SMITH LAND SURVEYING
P.O.BOX 150 GLENVILLE, WV. 26351

TOPO SECTION OF NESTORVILLE 7.5'

FILE NO. 7862 DATE 7/11/12 SCALE 1"=1000'

ORELLI LEASE 15.3 ACRES± WELL NO. 1

NORTH

10,120'

LATITUDE 39° 15' 00"

LONGITUDE 79° 57' 30"

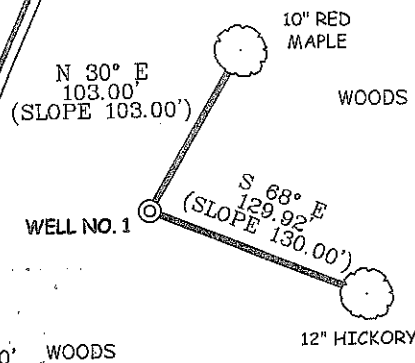
11,440'

MATTHEW R.
KIRSCH ET AL
14 ACRES±MATTHEW R.
KIRSCH ET AL
3.6 ACRES±LOIS POE
20.3 ACRES±MATTHEW R.
KIRSCH ET AL
15 ACRES±WMF McQUAIN
ET AL
.59 ACRES±ROOF BOLT
FOUNDMATTHEW R.
KIRSCH ET AL
3.6 ACRES±LINDA McQUAIN
4.1 ACRES±SHILOH
DEVELOPMENT
INC.
15 ACRES±3/4" REBAR
FOUNDMATTHEW R.
KIRSCH ET AL
11 ACRES±WELL NO. 1
STATE PLANE COORDINATES
NORTH ZONE (NAD '27)N. 262,119
E. 1,860,024LAT=(N) 39.218616
LONG=(W) 79.994043UTM (NAD'83)
N. 4,341,530
E. 586,857

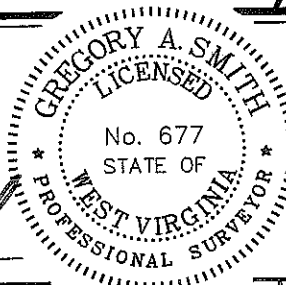
REFERENCES

NOTES ON SURVEY

1. TIES TO WELLS AND CORNERS ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM NORTH ZONE NAD '27.
2. LEASE BOUNDARY SHOWN HEREON TAKEN FROM DEED BOOK 449 AT PAGE 163.
3. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF BARBOUR COUNTY IN JUNE 2012.
4. WELL LAT./LONG. (NAD'27) ESTABLISHED BY DGPS(SUBMETER MAPPING GRADE).



I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DIVISION OF ENVIRONMENTAL PROTECTION.

P.S.
677

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

DATE JULY 02, 20 12

REVISED DATE SEPTEMBER 13, 20 12

OPERATORS WELL NO. ORELLI No. 1

API WELL NO. 47 - 001 - 03281
STATE COUNTY PERMIT

MINIMUM DEGREE
OF ACCURACY

1 / 200

FILE NO. 7860P1 (418-30)

SCALE 1" = 300'

PROVEN SOURCE
OF ELEVATION

DGPS (SUBMETER MAPPING GRADE)

STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS



WELL TYPE: OIL GAS ☒ LIQUID INJECTION ☐ WASTE DISPOSAL ☐ IF "GAS" PRODUCTION ☒ STORAGE ☐ DEEP ☐ SHALLOW ☒

LOCATION:

ELEVATION 1,543' WATERSHED WOLF RUN OF TYGART RIVER

DISTRICT PLEASANTS COUNTY BARBOUR QUADRANGLE NESTORVILLE 7.5'

SURFACE OWNER SONDRA L. ORELLI

ACREAGE 15.3±

ROYALTY OWNER SONDRA L. ORELLI

LEASE ACREAGE 15.3±

PROPOSED WORK:

DRILL ☐ CONVERT ☐ DRILL DEEPER ☐ REDRILL ☐ FRACTURE OR STIMULATE ☒ PLUG OFF OLDFORMATION ☐ PERFORATE NEW FORMATION ☒ PLUG AND ABANDON ☐ CLEAN OUT AND REPLUG ☐ OTHER ☐

PHYSICAL CHANGE IN WELL (SPECIFY)

TARGET FORMATION BENSON ELK

ESTIMATED DEPTH 5,050'

WELL OPERATOR ANJA RESOURCES

DESIGNATED AGENT JONNIE ROMINGER

ADDRESS 12 MILLBROOK ROAD
BRIDGEPORT, WV 26330ADDRESS 12 MILLBROOK ROAD
BRIDGEPORT, WV 26330

COUNTY NAME

PERMIT



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

September 21, 2012

WELL WORK PERMIT

Re-Work

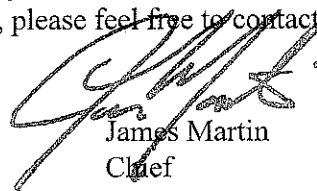
This permit, API Well Number: 47-7301117, issued to LIPPIZAN PETROLEUM, INC., is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto.

Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Please be advised that form WR-35, well operators report of well work, is to be submitted to this office within 90 days of completion of drilling, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.



James Martin
Chief

Operator's Well No: BAILEY 1
Farm Name: BAILEY, MATTHEW

API Well Number: 47-7301117

Permit Type: Re-Work

Date Issued: 09/20/2012

Promoting a healthy environment.



WILLOW LAND SURVEYING PLLC
266 HUSHERS RUN RD PENNSBORO, WV 26415
(304) 659-3207

TOPO SECTION OF RAVEN ROCK 7.5'
JOB # 11-015 4/04/11 1" = 1000'

SURV. LON: 81°09'31.6"
DEC. LON: 81.1588

9,547'

LATITUDE 39°25'00"

PROPOSED WELL
NAD 83 UTM ZONE 17
COORDINATES
N: 4,362,303m
E: 486,344m

PROPOSED WELL
ST. PLANE NAD 27
COORDINATES
N: 335,787ft
E: 1,531,333ft

LEGEND

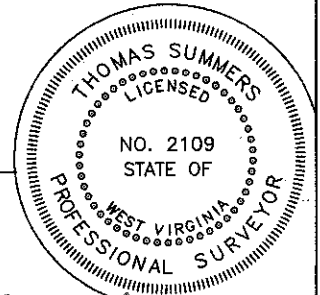
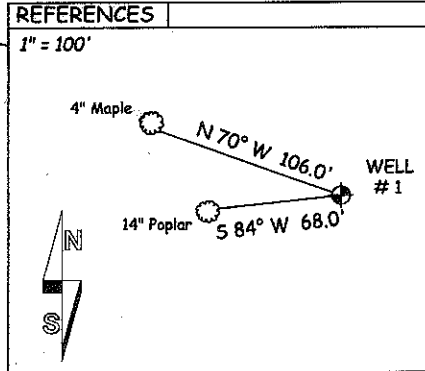
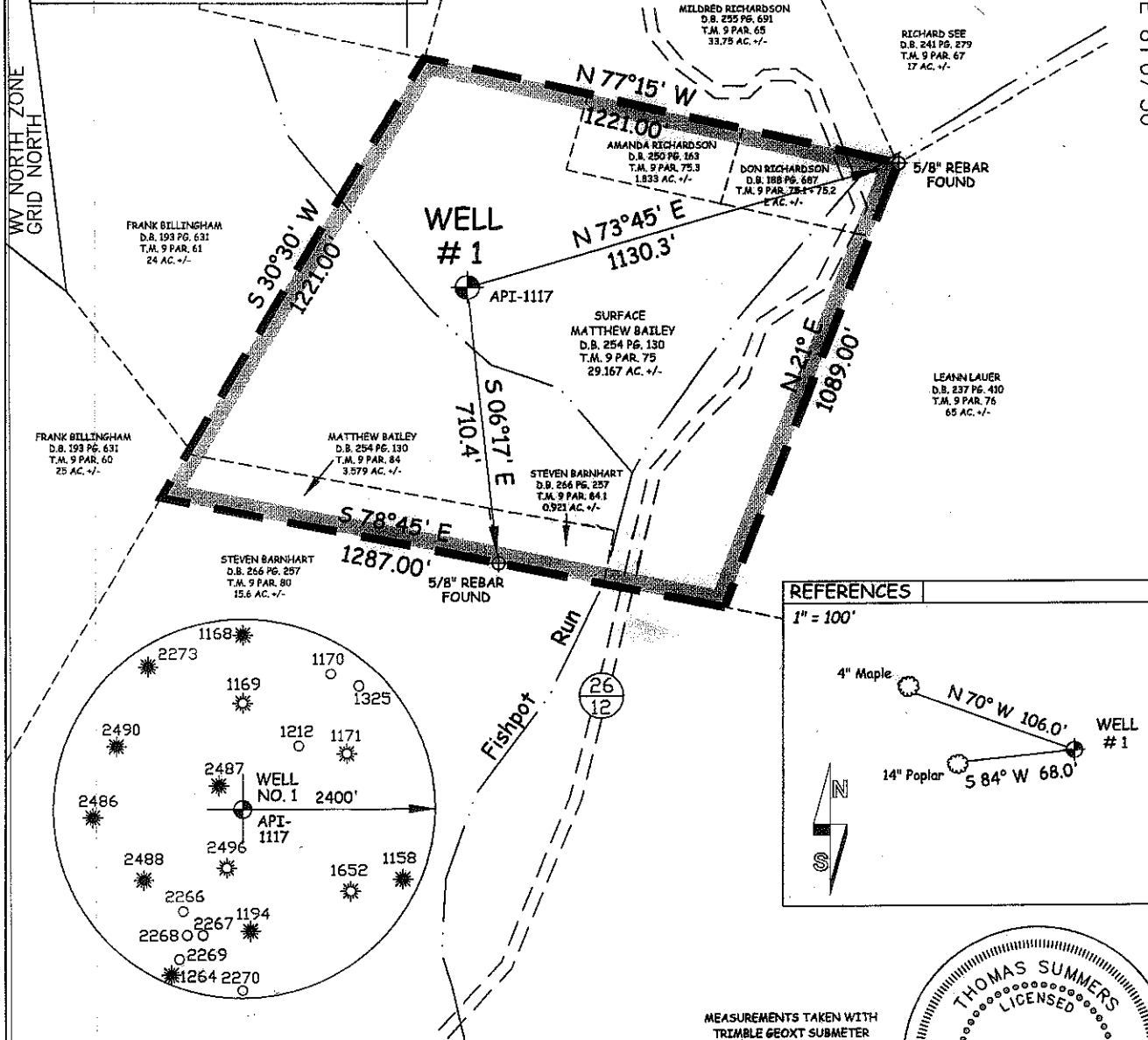
--- Surface Owner Boundary Lines +/-
--- Interior Surface Tracts +/-
⊕ Found monument, as noted

Lippizan Petroleum, Inc.
A. G. Bailey Well No. 1

LONGITUDE 81°07'30"

SURV. LAT: 39°24'36.2"
DEC. LAT: 39.4101

WV NORTH ZONE
GRID NORTH



MEASUREMENTS TAKEN WITH
TRIMBLE GEOXT SUBMETER
MAPPING GRADE UNIT.

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

JOB # 11-15
DRAWING # LIPPIZANWP1
SCALE 1" = 400'
MINIMUM DEGREE OF
ACCURACY 1/200'
PROVEN SOURCE OF ELEV.
SUBMETER MAPPING GRADE GPS

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO
THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION
REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PERSCRIBED BY
THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



STATE OF WEST VIRGINIA, DIVISION
OF ENVIRONMENTAL PROTECTION,
OFFICE OF OIL AND GAS
WILLOW LAND SURVEYING PLLC
266 HUSHERS RUN RD PENNSBORO
WEST VIRGINIA 26415

THOMAS SUMMERS P.S. 2109

DATE 4/04/11
OPERATOR'S WELL # NO. 1
API WELL #

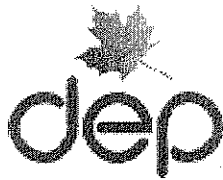
STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY
DIVISION OF OIL AND GAS

WELL TYPE: OIL ☐ GAS ☒ LIQUID INJECTION ☐ WASTE DISPOSAL ☐
(IF "GAS") PRODUCTION ☒ STORAGE ☐ DEEP ☐ SHALLOW ☒
LOCATION: ELEVATION 675' WATERSHED FISH POT RUN
DISTRICT UNION COUNTY PLEASANTS
QUADRANGLE RAVEN ROCK 7.5'

SURFACE OWNER MATTHEW BAILEY ACREAGE 29.167 AC. +/-
OIL & GAS ROYALTY OWNER LEASE ACREAGE 33 AC. +/-
PROPOSED WORK: DRILL ☐ CONVERT ☐ DRILL DEEPER ☐ REDRILL ☐ FRACTURE OR
STIMULATE ☒ PLUG OFF OLD FORMATION ☒ PERFORATE NEW FORMATION ☒
OTHER PHYSICAL CHANGE IN WELL (SPECIFY)
PLUG & ABANDON ☐ CLEAN OUT & REPLUG ☐ ESTIMATED DEPTH 1610'
TARGET FORMATION SQUAW
WELL OPERATOR LIPPIZAN PETROLEUM, INC
ADDRESS P.O. BOX 98
ELLENBORO, WV 26346
DESIGNATED AGENT ROBERT MATTHEY, JR.
ADDRESS P.O. BOX 98
ELLENBORO, WV 26346

FORM WW-6

COUNTY NAME PERMIT



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

September 20, 2012

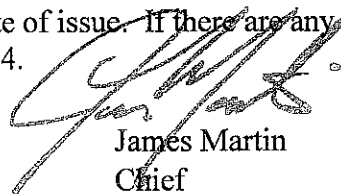
WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-3901488, issued to PANTHER, LLC, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Upon completion of the plugging well work, the above named operator will reclaim the site according to the provisions of WV Code 22-6-30. The above named operator will also file, as required in WV Code 22-6-23, an affidavit on form WR-38 by two experienced persons in the operator's employment and the Oil and Gas inspector that the work authorized under this permit was performed and a description given. Failure to abide by all statutory and regulatory provisions governing all duties and operations here under may result in suspensions or revocation of this permit and in addition may result in civil and/or criminal penalties being imposed upon the operator.

This permit will expire in two (2) years from date of issue. If there are any questions, please free to contact me at (304) 926-0499 ext. 1654.



James Martin
Chief

Operator's Well No: 335

Farm Name: SHONK LAND COMPANY

API Well Number: 47-3901488

Permit Type: Plugging

Date Issued: 09/20/2012

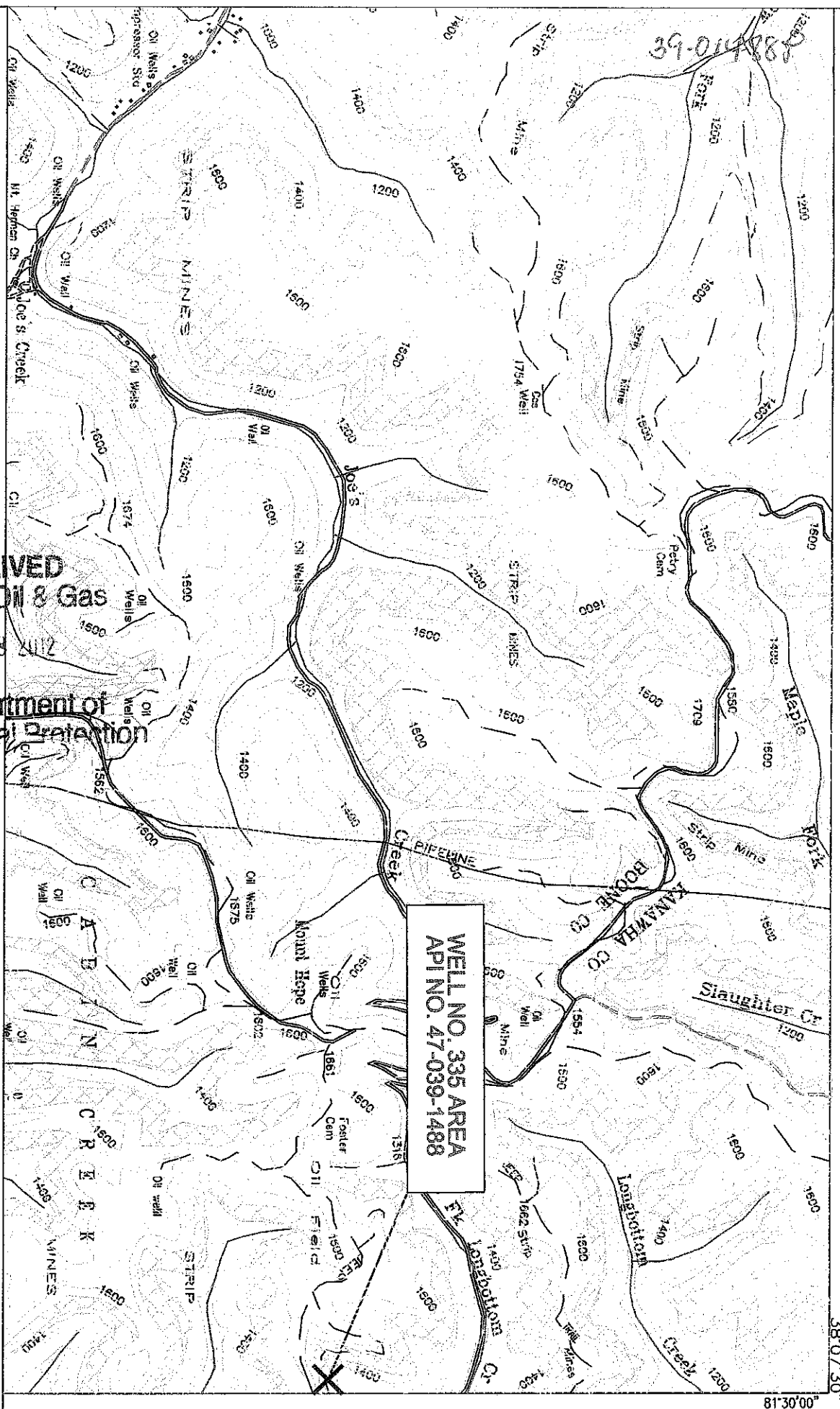
Promoting a healthy environment.

Well No. 335
Scale: 1"=2000'

SEP 18 2012

WV Department of

7.5 MINUTE SERIES (TOPOGRAPHIC)
NE/4 PEYTONA 15 MINUTE QUADRANGLE





West Virginia Department of Environmental Protection
Office of Oil and Gas
WELL LOCATION FORM: GPS

API: 47-039-1488^P WELL NO.: 335
FARM NAME: Williams Coal Co.
RESPONSIBLE PARTY NAME: Gary E. Acord
COUNTY: Kanawha DISTRICT: Cabin Creek
QUADRANGLE: Sylvester
SURFACE OWNER: Shonk Land Company
ROYALTY OWNER: Shonk Land Company
UTM GPS NORTHING: 4217399.2
UTM GPS EASTING: 456114.5 GPS ELEVATION: 1,417.8 feet

The Responsible Party named above has chosen to submit GPS coordinates in lieu of preparing a new well location plat for a plugging permit or assigned API number on the above well. The Office of Oil and Gas will not accept GPS coordinates that do not meet the following requirements:

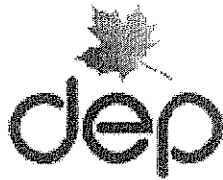
1. Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
2. Accuracy to Datum – 3.05 meters
3. Data Collection Method:
Survey grade GPS X: Post Processed Differential _____
Real-Time Differential _____
Mapping Grade GPS _____: Post Processed Differential _____
Real-Time Differential _____

4. Letter size copy of the topography map showing the well location.

I the undersigned, hereby certify this data is correct to the best of my knowledge and belief and shows all the information required by law and the regulations issued and prescribed by the Office of Oil and Gas.

Gary E. Acord, PE SUPERVISING ENGINEER
Signature Title

9-13-12
Date



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

September 20, 2012

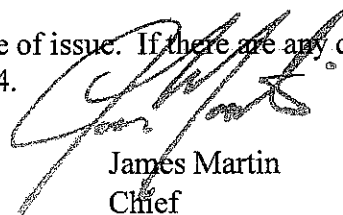
WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-3906342, issued to PANTHER, LLC, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Upon completion of the plugging well work, the above named operator will reclaim the site according to the provisions of WV Code 22-6-30. The above named operator will also file, as required in WV Code 22-6-23, an affidavit on form WR-38 by two experienced persons in the operator's employment and the Oil and Gas inspector that the work authorized under this permit was performed and a description given. Failure to abide by all statutory and regulatory provisions governing all duties and operations here under may result in suspensions or revocation of this permit and in addition may result in civil and/or criminal penalties being imposed upon the operator.

This permit will expire in two (2) years from date of issue. If there are any questions, please free to contact me at (304) 926-0499 ext. 1654.



James Martin
Chief

Operator's Well No: 325

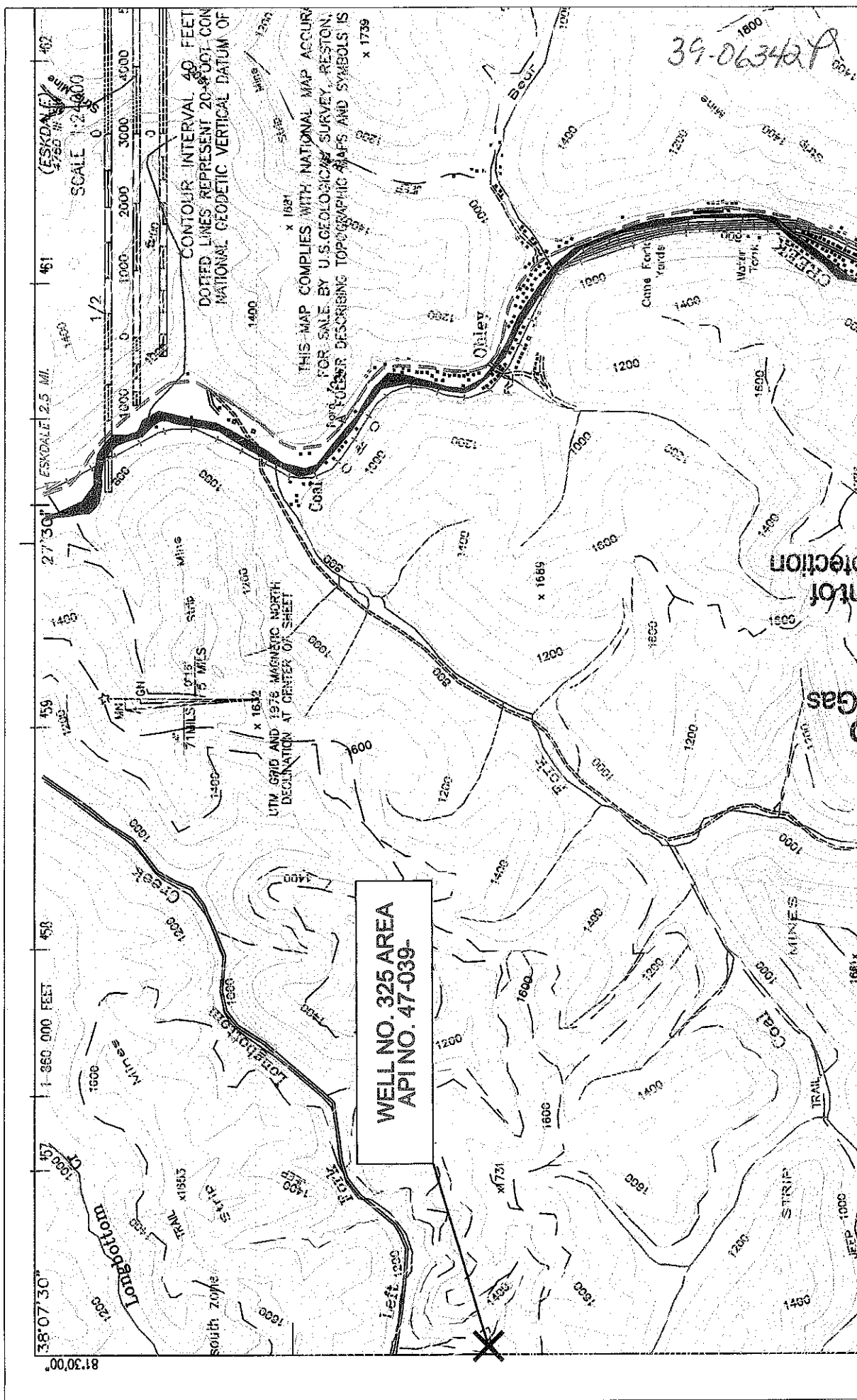
Farm Name: SHONK LAND COMPANY

API Well Number: 47-3906342

Permit Type: Plugging

Date Issued: 09/20/2012

Promoting a healthy environment.



SPEED MINING, LLC.
AMERICAN EAGLE MINE
Well No. 325
Scale: 1"=2000'

RECEIVED
Office of Oil & Gas
SEP 18 2012
U.S. Department of
Environmental Protection

ESKDALE QUADRANGLE
WEST VIRGINIA - KANAWHA CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
NW/4 MONTGOMERY 15 MINUTE QUADRANGLE



West Virginia Department of Environmental Protection
Office of Oil and Gas
WELL LOCATION FORM: GPS

39-06342P
API: Needs an API Number (Kan 1454) WELL NO.: 325
FARM NAME: Williams Coal Co.
RESPONSIBLE PARTY NAME: Gary E. Acord
COUNTY: Kanawha DISTRICT: Cabin Creek
QUADRANGLE: Eskdale
SURFACE OWNER: Shonk Land Company
ROYALTY OWNER: Shonk Land Company
UTM GPS NORTHING: 4217573.8
UTM GPS EASTING: 456283.1 GPS ELEVATION: 1274.6 feet

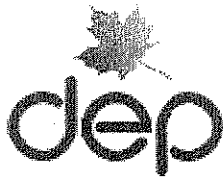
The Responsible Party named above has chosen to submit GPS coordinates in lieu of preparing a new well location plat for a plugging permit or assigned API number on the above well. The Office of Oil and Gas will not accept GPS coordinates that do not meet the following requirements:

1. Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
2. Accuracy to Datum – 3.05 meters
3. Data Collection Method:
Survey grade GPS X : Post Processed Differential _____
Real-Time Differential _____
Mapping Grade GPS _____: Post Processed Differential _____
Real-Time Differential _____

4. Letter size copy of the topography map showing the well location.

I the undersigned, hereby certify this data is correct to the best of my knowledge and belief and shows all the information required by law and the regulations issued and prescribed by the Office of Oil and Gas.

George Acord, P.E. SUPERVISING ENGINEER 9-13-12
Signature Title Date



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

September 20, 2012

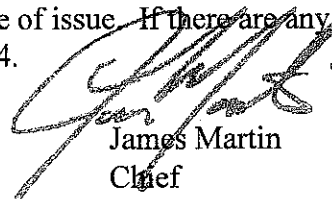
WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-100866, issued to CHESAPEAKE APPALACHIA, L.L.C., is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Upon completion of the plugging well work, the above named operator will reclaim the site according to the provisions of WV Code 22-6-30. The above named operator will also file, as required in WV Code 22-6-23, an affidavit on form WR-38 by two experienced persons in the operator's employment and the Oil and Gas inspector that the work authorized under this permit was performed and a description given. Failure to abide by all statutory and regulatory provisions governing all duties and operations here under may result in suspensions or revocation of this permit and in addition may result in civil and/or criminal penalties being imposed upon the operator.

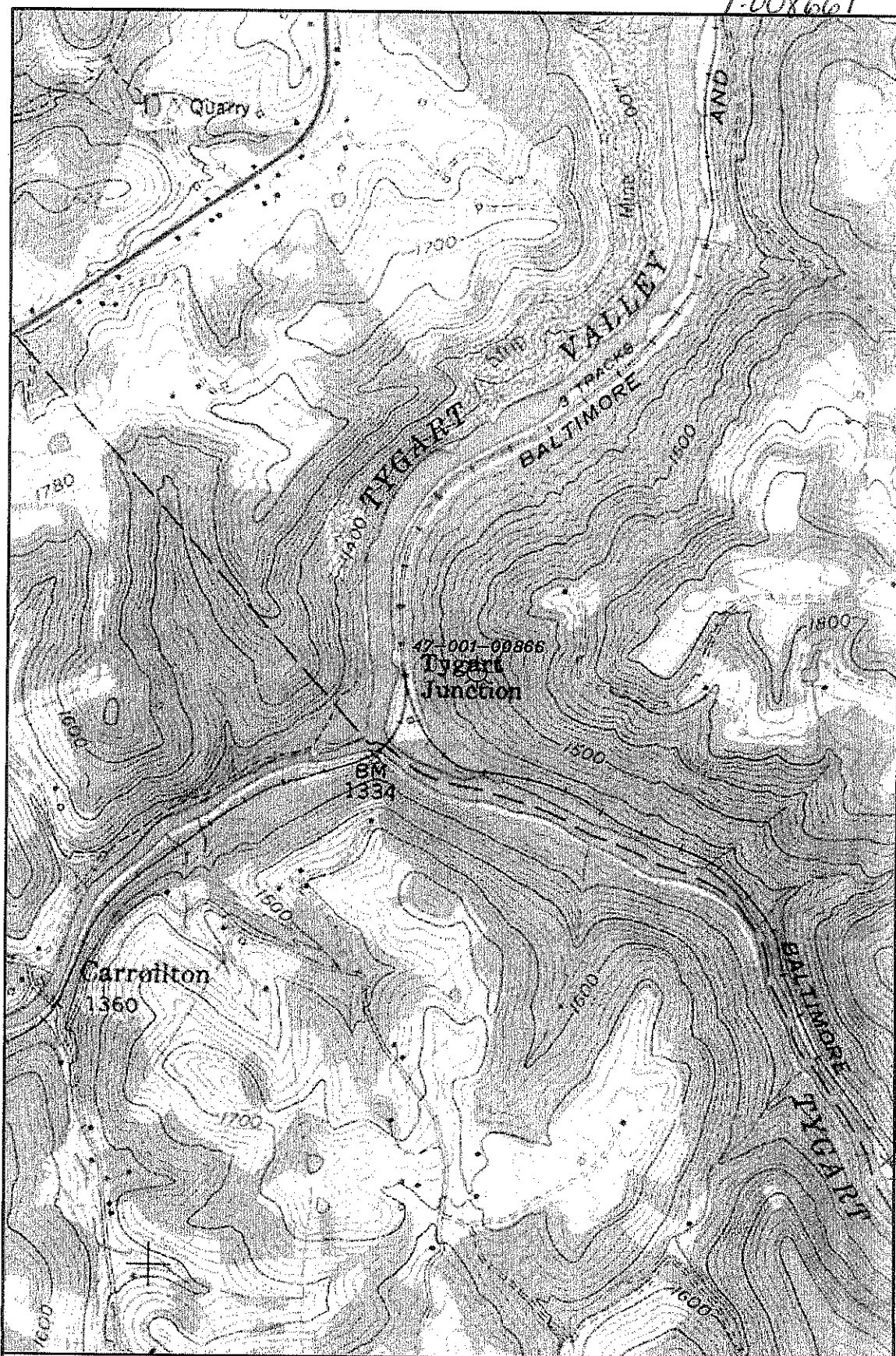
This permit will expire in two (2) years from date of issue. If there are any questions, please free to contact me at (304) 926-0499 ext. 1654.



James Martin
Chief

Operator's Well No: 910662
Farm Name: CORLEY, CHARLES
API Well Number: 47-100866
Permit Type: Plugging
Date Issued: 09/20/2012

Promoting a healthy environment.



WELL: A-662 (Dayton)
 PERMIT #: 47-001-00866
 QUAD: AUDRA 7 1/2'
 DISTRICT: PHILIPPI
 COUNTY: BARBOUR
 STATE: WEST VIRGINIA

GEOGRAPHIC NAD27
 Latitude: 39.098572 N
 Longitude: 80.072943 W
 UTM NAD83 (Meters)
 4328135.4 N
 580181.7 E

Scale: 1"=1000'


Chesapeake
 ENERGY

P.O. Box 18496 Oklahoma City, OK 73164-0496

8-30-06

WW-7



West Virginia Department of Environmental Protection
Office of Oil and Gas

WELL LOCATION FORM: GPS

API: 47-001-00866 P

WELL NO.: 910662

FARM NAME: Ruth Woods Dayton

RESPONSIBLE PARTY NAME: Chesapeake Appalachia, LLC

COUNTY: Barbour DISTRICT: Audra

QUADRANGLE: Philippi

SURFACE OWNER: Charles Corely

ROYALTY OWNER: Same

UTM GPS NORTHING: 4328135.4

UTM GPS EASTING: 580181.7

GPS ELEVATION: 1512'

The Responsible Party named above has chosen to submit GPS coordinates in lieu of preparing a new well location plat for a plugging permit or assigned API number on the above well. The Office of Oil and Gas will not accept GPS coordinates that do not meet the following requirements:

1. Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
2. Accuracy to Datum – 3.05 meters
3. Data Collection Method:

Survey grade GPS ____: Post Processed Differential ____
Real-Time Differential ____

Mapping Grade GPS ____: Post Processed Differential ____
Real-Time Differential ____

4. **Letter size copy of the topography map showing the well location.**

I the undersigned, hereby certify this data is correct to the best of my knowledge and belief and shows all the information required by law and the regulations issued and prescribed by the Office of Oil and Gas.

Signature

Date

9/17/12

Title

Reg Tech. I



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

September 19, 2012

WELL WORK PERMIT

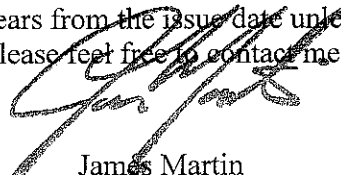
Horizontal 6A Well

This permit, API Well Number: 47-9502054, issued to ANTERO RESOURCES APPALACHIAN CORPORATION, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Please be advised that form WR-35, well operators report of well work, is to be submitted to this office within 90 days of completion of drilling, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

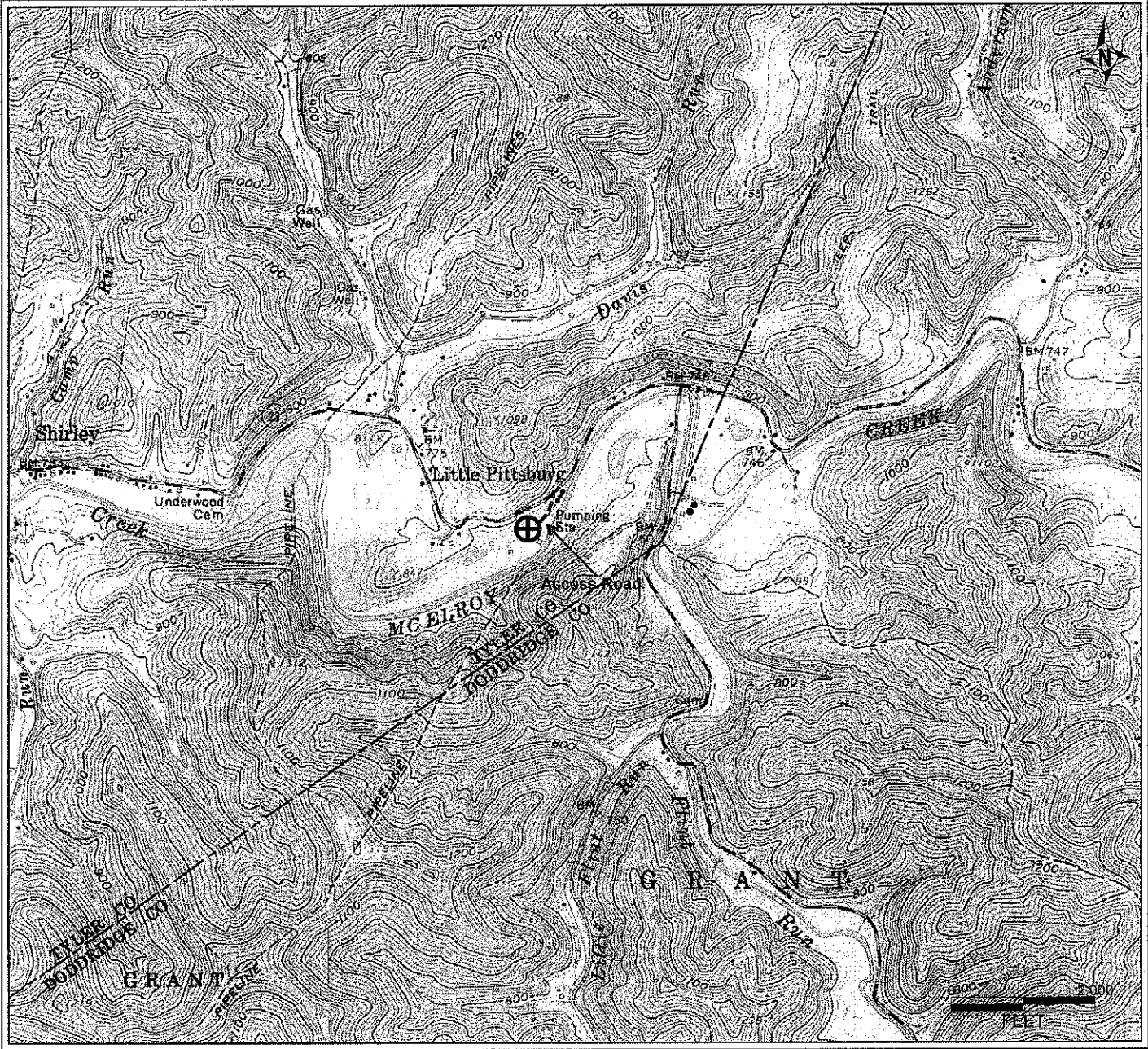
Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.



James Martin
Chief

Operator's Well No: ED ARNOLD UNIT 3H
Farm Name: MOORE, FOREST AND BRENDA
API Well Number: 47-9502054
Permit Type: Horizontal 6A Well
Date Issued: 09/19/2012

Promoting a healthy environment.



PETRA 8/5/2011 1:12:30 PM

Antero Resources Corporation
APPALACHIAN BASIN
Ed Arnold Unit 3H
Tyler County
<div>020004000</div> <div>FEET</div>
REMARKS QUADRANGLE: CENTER POINT WATERSHED: MCELROY DISTRICT: MCELROY
Date: 08/26/11

9,012' TO TOP HOLE

LATITUDE 39°25'00"

2,188' TO BOTTOM HOLE

LATITUDE 39°25'00"

**Antero Resources
Well No. Ed Arnold Unit 3H
Appalachian Corporation****LEGEND**

- Surface Owner Boundary Lines +/-
--- Interior Surface Tracts +/-
⊕ Found monument, as noted

Tyler County Surface Tracts

A	Ralph Sweeney TM 20 PAR 17.1	DB 301 PG 2 12.466 Ac.
B	Mary Lemasters TM 20 PAR 17.2	WB 34 PG 23 8.919 Ac.
C	Forest Moore TM 20 PAR 14	DB 253 PG 63 0.81 Ac.
D	Forest Moore TM 20 PAR 13.1	DB 296 PG 134 26.478 Ac.
E	Daniel Moore TM 20 PAR 8	DB 296 PG 434 20.25 Ac.
F	Olive Sheets TM 20 PAR 9	DB 164 PG 443 38.57 Ac.

NOTES:
WELL 3-H TOP HOLE INFORMATION:
N: 328,713ft E: 1,649,513ft
LAT: 39°23'45.13" LON: 80°44'24.80"
BOTTOM HOLE INFORMATION:
N: 325,273ft E: 1,656,291ft
LAT: 39°23'12.05" LON: 80°42'57.87"
WEST VIRGINIA COORDINATE
SYSTEM OF 1927 NORTH ZONE.
ZONE WAS DERIVED FROM
MEASUREMENTS TAKEN WITH
TRIMBLE GEOXT SUBMETER
MAPPING GRADE GPS UNIT.
PLAT ORIENTATION, CORNER,
AND WELL REFERENCE TIE LINES
ARE BASED ON GRID NORTH.

(NAD) 83 (UTM) ZONE 17 COORDS:
WELL 3-H TOP HOLE INFORMATION:
N: 4,360,750m E: 522,384m
BOTTOM HOLE INFORMATION:
N: 4,359,736m E: 524,466m

NOTE A:
RALPH & SHELLY SWEENEY LEASE
NO. 21361

RONALD KUKLISH
D.B. 219 PG. 523
T.M. 17 PAR. 01
54.93 AC +/-

CHESTER BROOKOVER
D.B. 150 PG. 175
T.M. 17 PAR. 04
63.92 AC +/-

JORDAN FAMILY
PARTNERSHIP
D.B. 230 PG. 605
T.M. 17 PAR. 06
57.5 AC +/-

JORDAN FAMILY
PARTNERSHIP
D.B. 230 PG. 605
T.M. 17 PAR. 01
46.0 AC +/-

MICHAEL BENEDUM
D.B. 223 PG. 430
T.M. 2 PAR. 01
32 AC +/-

ERIC GESSLER
D.B. 285 PG. 242
T.M. 2 PAR. 11
387 AC +/-

FLINT OIL & GAS
D.B. 132 PG. 312
T.M. 2 PAR. 08
71 AC +/-

ARLEIGH G. DOTSON
D.B. 250 PG. 115
T.M. 2 PAR. 42
84.87 AC +/-

COASTAL LUMBER CO.
D.B. 250 PG. 115
T.M. 2 PAR. 03
77.31 AC +/-

COASTAL LUMBER CO.
D.B. 250 PG. 115
T.M. 2 PAR. 03
77.31 AC +/-

HARRISON-RITCHIE
OIL & GAS COMPANY
LEASE
NO. 7325

LINE	BEARING	DIST.
W1	N38°29'W	1579.6'
W2	N48°06'W	1599.3'
W3	N56°59'W	1616.6'
W4	N71°42'W	1080.7'
W5	N72°29'W	978.6'
W6	N73°42'W	1036.9'
W7	S84°53'W	911.9'
W8	S83°38'W	1032.9'
W9	S78°52'W	1283.6'

W1
W2
W3
W4
W5
W6
W7
W8
W9

WELL # 3-H

NOTE:
9 WATER WELLS WERE
LOCATED WITHIN 2000'
OF PROPOSED WELL

570
3000'

1859

4966

REFERENCES

1" = 400'

10' Hickory

N119°31'W

1611.3'

S22°23'W

402.3'

WELL # 3-H

24" Poplar

PAD LAYOUT

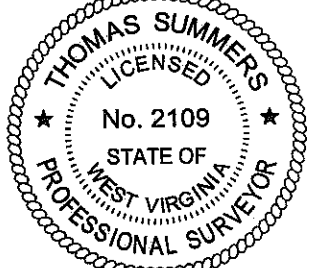
NOT TO SCALE

Ed Arnold Unit 2H

Ed Arnold Unit 1H

Ed Arnold Unit 1

Ed Arnold Unit 3H



JOB # 11-059
DRAWING # EDARNOLDUNIT3H
SCALE 1" = 2000'
MINIMUM DEGREE OF
ACCURACY SUBMETER
PROVEN SOURCE OF ELEV.
SUBMETER MAPPING GRADE GPS

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO
THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION
REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PERSCRIBED BY
THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



STATE OF WEST VIRGINIA, DIVISION
OF ENVIRONMENTAL PROTECTION,
OFFICE OF OIL AND GAS
WILLOW LAND SURVEYING PLLC
266 HUSHERS RUN RD PENNSBORO
WEST VIRGINIA 26415

THOMAS SUMMERS P.S. 2109

STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY
DIVISION OF OIL AND GAS

WELL TYPE: OIL ___ GAS ☒ LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS") PRODUCTION ☒ STORAGE ___ DEEP ___ SHALLOW ☒
LOCATION: ELEVATION 749' WATERSHED McELROY CREEK DISTRICT McELROY COUNTY TYLER

QUADRANGLE CENTER POINT 7.5'

SURFACE OWNER FOREST & BRENDA MOORE ACREAGE 26.478 ACRES +/-
OIL & GAS ROYALTY OWNER RALPH T. & SHELLY A. SWEENEY; ARLEIGH G. DOTSON; LEASE ACREAGE 26.478 AC; 461.23 AC;
HARRISON-RITCHIE OIL & GAS COMPANY 54 AC

PROPOSED WORK: DRILL ☒ CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR
STIMULATE ☒ PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ☒

OTHER PHYSICAL CHANGE IN WELL (SPECIFY)
PLUG & ABANDON ___ CLEAN OUT & REPLUG ___ ESTIMATED DEPTH 6900' TVD 17,250' MD

TARGET FORMATION BURKETT DESIGNATED AGENT DIANNA STAMPER
WELL OPERATOR ANTERO RESOURCES APPALACHIAN CORP. CT CORPORATION SYSTEM

ADDRESS 1625 17TH STREET ADDRESS 5400 D BIG TYLER ROAD
DENVER, CO 80202 CHARLESTON, WV 25313

LEASE # 21361; 7258; 7325



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

September 19, 2012

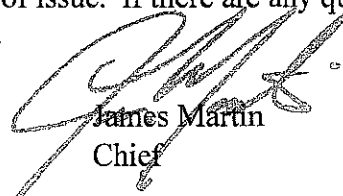
WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-8700133, issued to UNKNOWN - DEP PAID PLUGGING CONTRACT, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Upon completion of the plugging well work, the above named operator will reclaim the site according to the provisions of WV Code 22-6-30. The above named operator will also file, as required in WV Code 22-6-23, an affidavit on form WR-38 by two experienced persons in the operator's employment and the Oil and Gas inspector that the work authorized under this permit was performed and a description given. Failure to abide by all statutory and regulatory provisions governing all duties and operations here under may result in suspensions or revocation of this permit and in addition may result in civil and/or criminal penalties being imposed upon the operator.

This permit will expire in two (2) years from date of issue. If there are any questions, please free to contact me at (304) 926-0499 ext. 1654.



James Martin
Chief

Operator's Well No: STARCHER 2
Farm Name: TRUMAN, JOHN

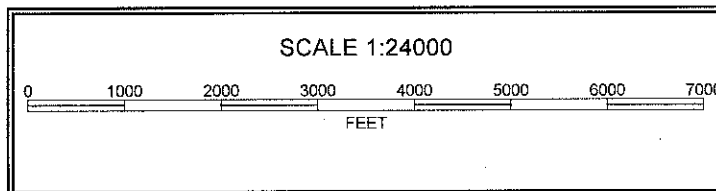
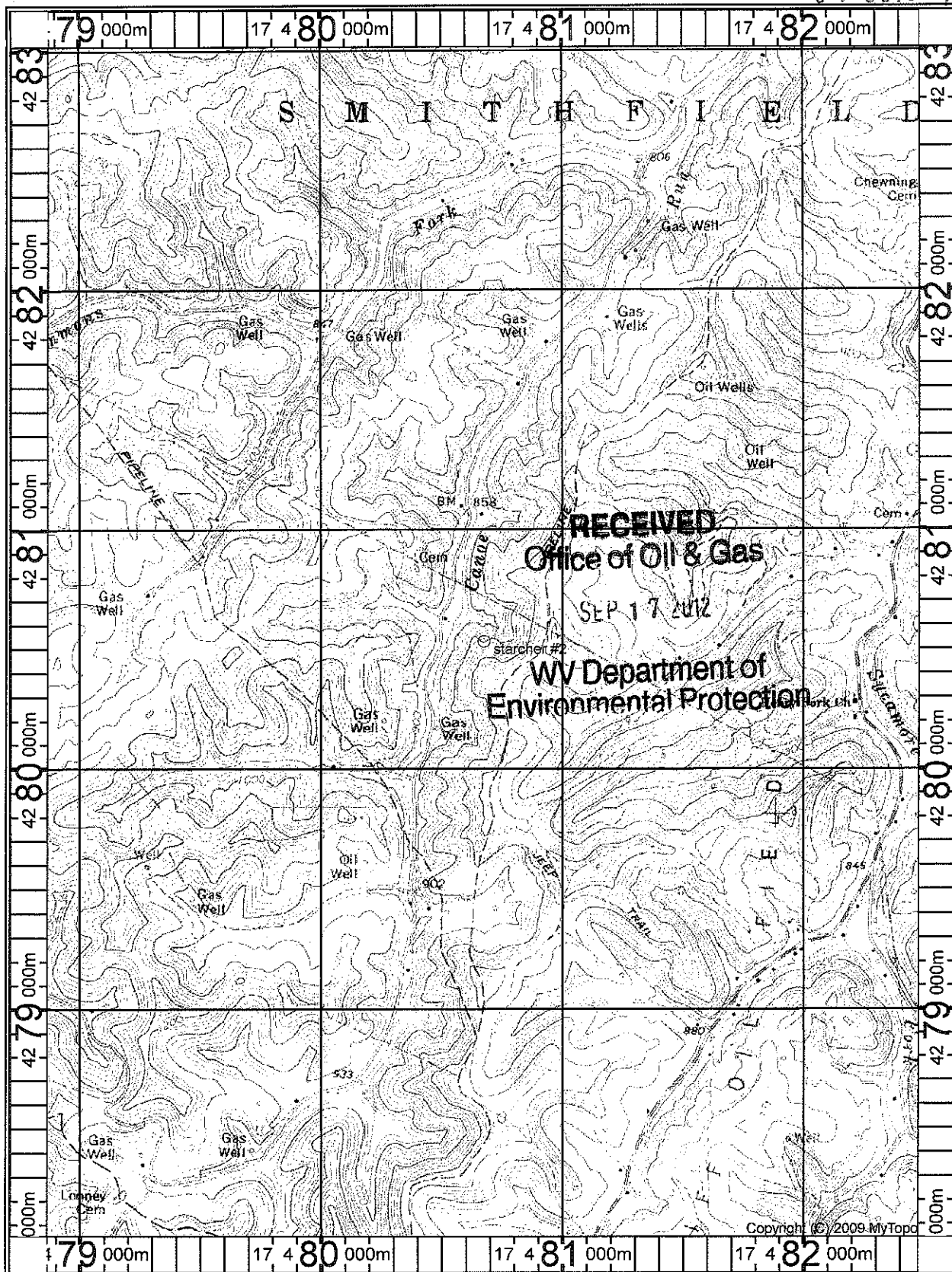
API Well Number: 47-8700133

Permit Type: Plugging

Date Issued: 09/19/2012

Promoting a healthy environment.

87-00135P





West Virginia Department of Environmental Protection
Office of Oil and Gas

WELL LOCATION FORM: GPS

API: 47-87-00133 ^P WELL NO.: #2

FARM NAME: John Truman

RESPONSIBLE PARTY NAME: WVDEP

COUNTY: Roane DISTRICT: Smithville

QUADRANGLE: Tarriff

SURFACE OWNER: John Truman

ROYALTY OWNER: Charles Despard

UTM GPS NORTHING: 4280553N

UTM GPS EASTING: 480673E GPS ELEVATION: 1025'

The Responsible Party named above has chosen to submit GPS coordinates in lieu of preparing a new well location plat for a plugging permit or assigned API number on the above well. The Office of Oil and Gas will not accept GPS coordinates that do not meet the following requirements:

1. Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
2. Accuracy to Datum – 3.05 meters
3. Data Collection Method:

Survey grade GPS : Post Processed Differential
Real-Time Differential

Mapping Grade GPS : Post Processed Differential
Real-Time Differential

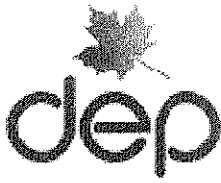
4. Letter size copy of the topography map showing the well location.

I the undersigned, hereby certify this data is correct to the best of my knowledge and belief and shows all the information required by law and the regulations issued and prescribed by the Office of Oil and Gas.

Dave Gilbert
Signature

Inspector
Title

Date 9/17/12



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

September 18, 2012

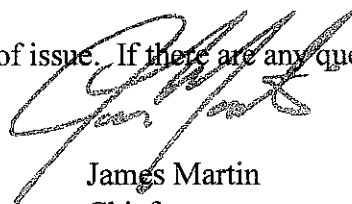
WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-7901341, issued to CABOT OIL & GAS CORPORATION, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Upon completion of the plugging well work, the above named operator will reclaim the site according to the provisions of WV Code 22-6-30. The above named operator will also file, as required in WV Code 22-6-23, an affidavit on form WR-38 by two experienced persons in the operator's employment and the Oil and Gas inspector that the work authorized under this permit was performed and a description given. Failure to abide by all statutory and regulatory provisions governing all duties and operations here under may result in suspensions or revocation of this permit and in addition may result in civil and/or criminal penalties being imposed upon the operator.

This permit will expire in two (2) years from date of issue. If there are any questions, please free to contact me at (304) 926-0499 ext. 1654.



James Martin
Chief

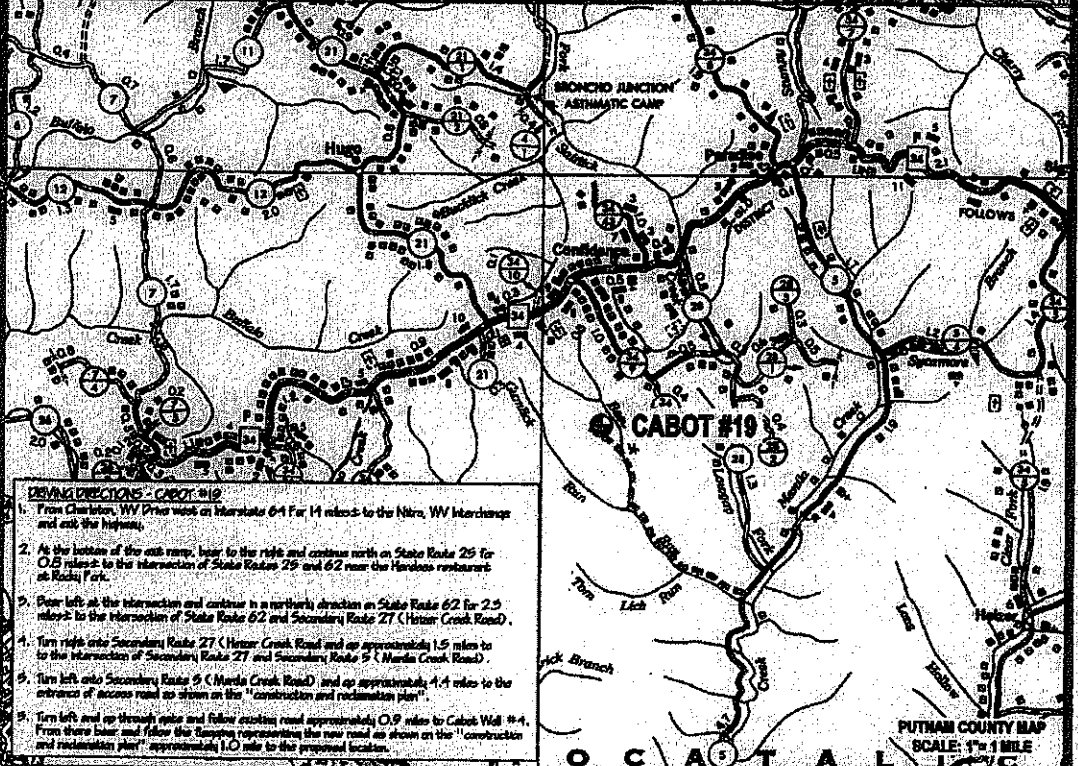
Operator's Well No: CABOT 19
Farm Name: AMHERST INDUSTRIES, INC.
API Well Number: 47-7901341
Permit Type: Plugging
Date Issued: 09/18/2012

Promoting a healthy environment.

79-01341P



IVED
& Gas
3 2012
Production



- DRIVING DIRECTIONS - CABOT #19**
1. From Charleston, WV Drive west on Interstate 64 for 14 miles to the Ntn, WV Interchange and exit the highway.
 2. At the bottom of the exit ramp, bear to the right and continue north on State Route 29 for 0.5 miles to the intersection of State Routes 29 and 62 near the Harbison restaurant at Rocky Fork.
 3. Bear left at the intersection and continue in a northerly direction on State Route 62 for 2.5 miles to the intersection of State Route 62 and Secondary Route 27 (Hester Creek Road).
 4. Turn right onto Secondary Route 27 (Hester Creek Road) and go approximately 1.5 miles to the intersection of Secondary Route 27 and Secondary Route 9 (Manda Creek Road).
 5. Turn left onto Secondary Route 9 (Manda Creek Road) and go approximately 4.4 miles to the entrance of access road as shown on the "Construction and reclamation plan".
 6. Turn left and go through gate and follow existing road approximately 0.9 miles to Cabot Well #4. From there bear left and follow the line representing the new road as shown on the "Construction and reclamation plan" approximately 1.0 mile to the proposed location.

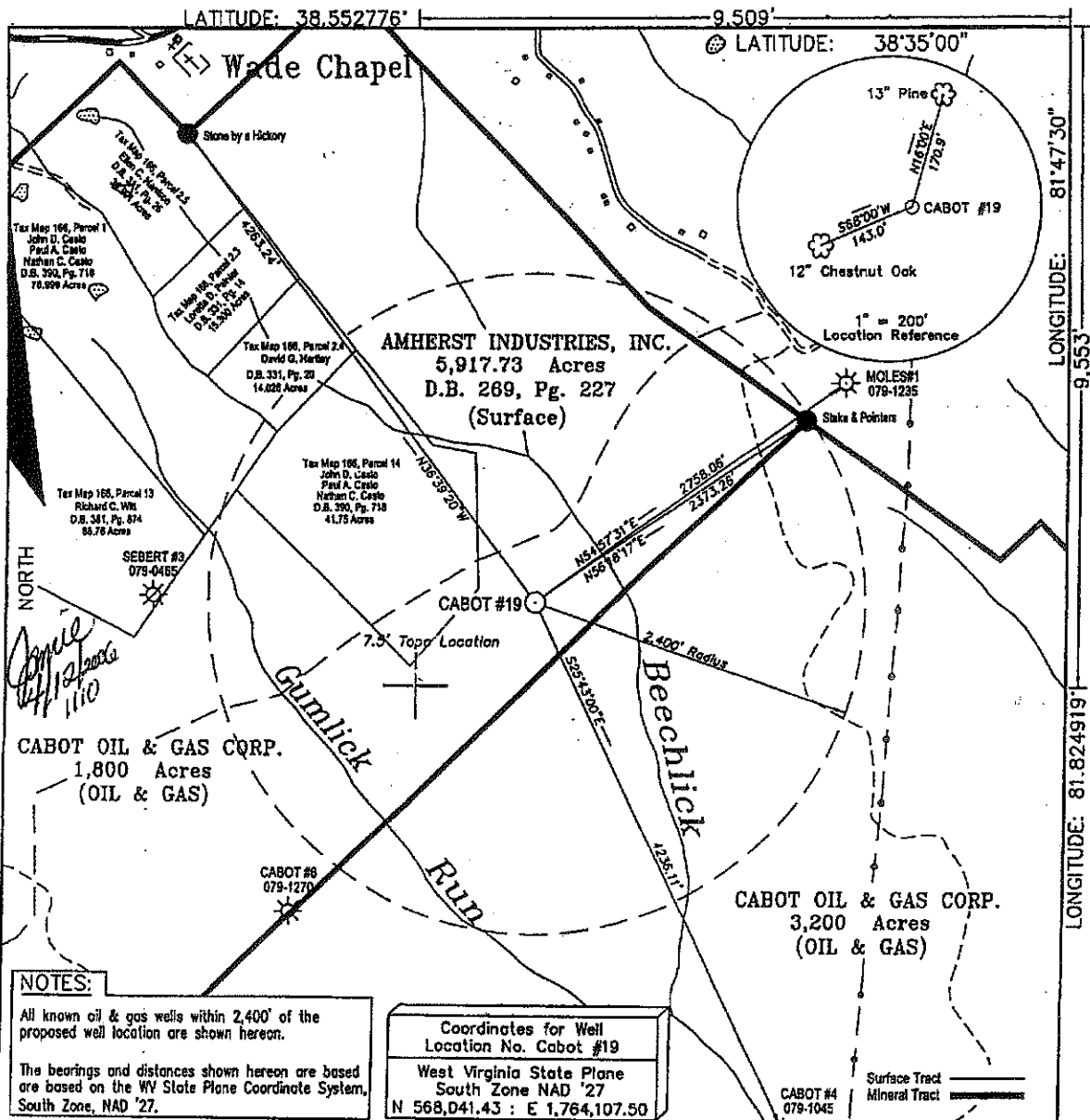
**Cabot Oil & Gas Corporation**

**CUNNINGHAM**
LAND SURVEYING & MAPPING SERVICES, LLC
• 8905 BENTLEY BOYS LANE •
• CROSS LAKE, WEST VIRGINIA 25915 •
• PHONE (804) 881-4189 • FAX (804) 778-0708 •
• E-MAIL ADDRESS • DECKINGHAM@CUNNINGHAMSVS.NET •

CABOT #19
LOCATION MAP

LOCATED ON THE WATERS OF BEECHLICK FORK
POCOTALICO RIVER
POCOTALICO DISTRICT, PUTNAM COUNTY, W.VA
BANCROFT QUADRANGLE

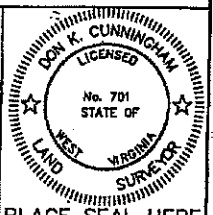
PROJECT: CABOT	DWG. NO. CABOT_19_LOC.DWG
DATE: 03-18-06	SCALE: AS NOTED
DRAWN BY: J.M. JONES	CHK'D BY: D.K.C.
FILE: C:\PROJECT FOLDER\CABOT	



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO. _____
DRAWING NO. Cabot_19_WW6.dwg
SCALE 1" = 1000'
MINIMUM DEGREE OF
ACCURACY 1 : 12,729
PROVEN SOURCE OF
ELEVATION Global Positioning
System (GPS)

I THE UNDERSIGNED, HEREBY CERTIFY THAT
THIS PLAT IS CORRECT TO THE BEST OF MY
KNOWLEDGE AND BELIEF AND SHOWS ALL THE
INFORMATION REQUIRED BY THE LAW AND THE
REGULATIONS AND ISSUED PRESCRIBED BY THE
DEPARTMENT OF ENERGY.
(SIGNED) Don K. Cunningham
R.P.E. _____ L.L.S. 701



STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

DATE February 16 2006
OPERATOR'S WELL NO. Cabot #19
API WELL NO. 47-079-01341 P

WELL TYPE: OIL ☐ GAS ☒ LIQUID INJECTION ☐ WASTE DISPOSAL ☐
(IF "GAS,") PRODUCTION ☐ STORAGE ☐ DEEP ☐ SHALLOW ☒

LOCATION: ELEVATION 945.36' WATER SHED Beechlick Run of Manila Creek of Pocatalico River
DISTRICT Pocatalico COUNTY Putnam

QUADRANGLE Bancroft

SURFACE OWNER Amherst Industries, Inc. ACREAGE 5,917.73
OIL & GAS ROYALTY OWNER Cabot Oil & Gas Corporation LEASE ACREAGE 1,800
LEASE NO. 47-9123M

PROPOSED WORK: DRILL ☐ CONVERT ☒ DRILL DEEPER ☐ REDRILL ☐ FRACTURE OR
STIMULATE ☒ PLUG OFF OLD FORMATION ☐ PERFORATE NEW
FORMATION ☐ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____

PLUG AND ABANDON ☐ CLEAN OUT AND REPLUG ☐

TARGET FORMATION Devonian Shale ESTIMATED DEPTH 6,000'

WELL OPERATOR Cabot Oil & Gas Corp. DESIGNATED AGENT Thomas Liberatore
ADDRESS P.O. Box 1473 ADDRESS P.O. Box 1473
Charleston, WV 25325 Charleston, WV 25325

COUNTY NAME PUT
PERMIT 1341



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

September 18, 2012

WELL WORK PERMIT
Secondary Recovery Well

This permit, API Well Number: 47-10302391, issued to HG ENERGY, LLC, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Please be advised that form WR-35, well operators report of well work, is to be submitted to this office within 90 days of completion of drilling, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.

James Martin
Chief

A handwritten signature in black ink, appearing to read 'James Martin', is written over a faint, larger signature.

Operator's Well No: ISRAEL MILLER 7
Farm Name: MILLER, ISRAEL - ESTATE
API Well Number: 47-10302391
Permit Type: Secondary Recovery Well
Date Issued: 09/18/2012

Promoting a healthy environment.

SCALE 1"=1000'

Longitude - 80° 41' 59.8"

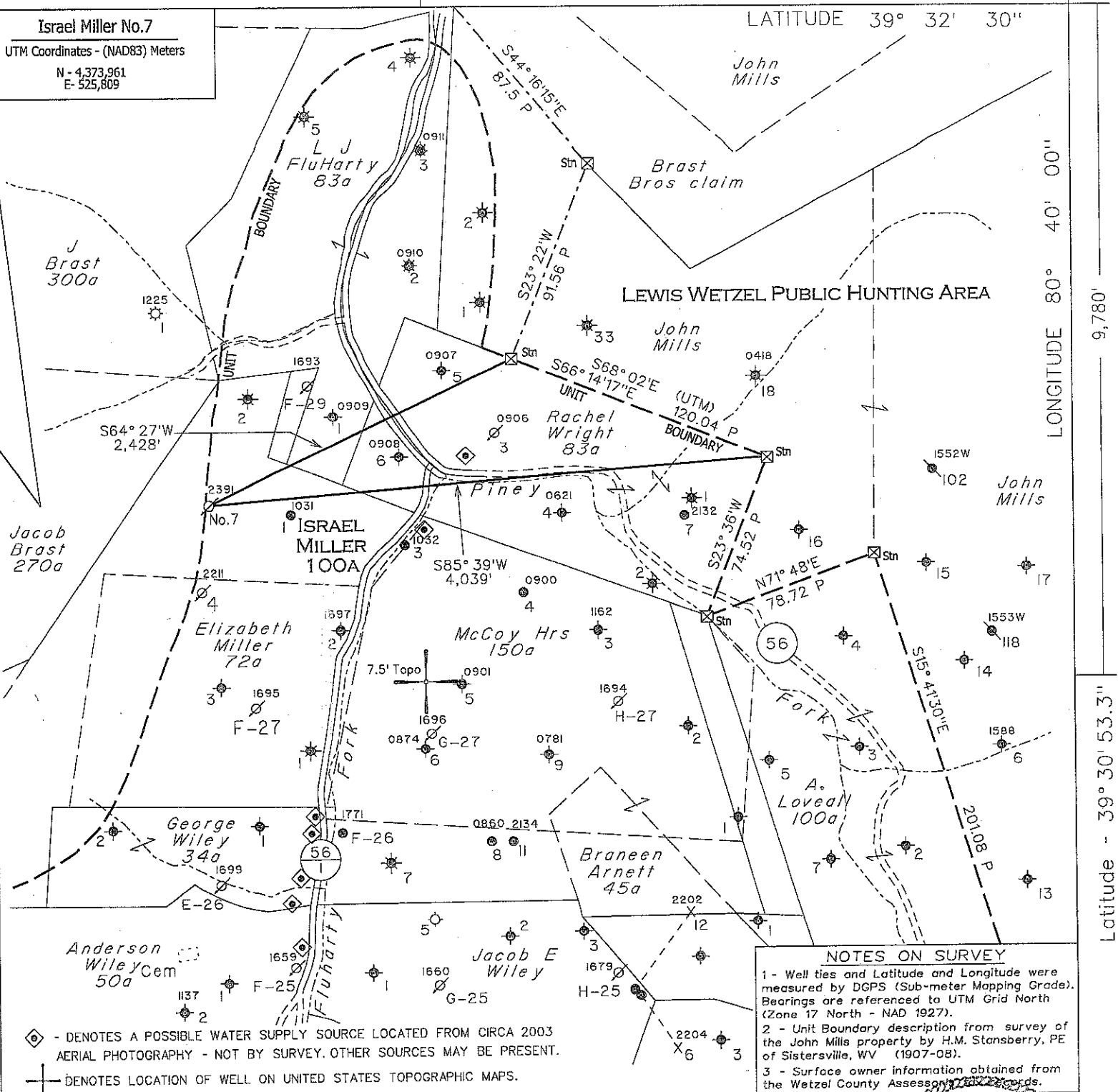
9.390'

Israel Miller No.7

UTM Coordinates - (NAD83) Meters

N - 4,373,961
E - 525,809

LATITUDE 39° 32' 30"



NOTES ON SURVEY

- 1 - Well ties and Latitude and Longitude were measured by DGPS (Sub-meter Mapping Grade). Bearings are referenced to UTM Grid North (Zone 17 North - NAD 1927).
- 2 - Unit Boundary description from survey of the John Mills property by H.M. Stansberry, PE of Sistersville, WV (1907-08).
- 3 - Surface owner information obtained from the Wetzel County Assessor's records.

FILE NO. 1043-20

MAP NO. N S E W

SCALE 1" = 1000'

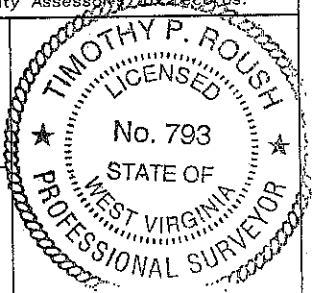
MINIMUM DEGREE OF
ACCURACY Sub-MeterPROVEN SOURCE OF
ELEVATION DGPS Survey (Post-
Processed Sub-Meter Mapping Grade)

I THE UNDERSIGNED, HEREBY CERTIFY THAT
THIS PLAT IS CORRECT TO THE BEST OF MY
KNOWLEDGE AND BELIEF AND SHOWS ALL THE
INFORMATION REQUIRED BY LAW AND THE REGU-
LATIONS ISSUED AND PRESCRIBED BY THE DEPART-
MENT OF MINES

(SIGNED)

TIMOTHY P. ROUSH

PS 793



WEST VIRGINIA

Division of Environmental Protection
Office of Oil and Gas
601 57th Street
Charleston, West Virginia 25304



DATE July 19, 2012

FARM Israel Miller No.7

API WELL NO.

47-103-2391

WELL TYPE: OIL GAS LIQUID INJECTION ☒ WASTE DISPOSAL HORIZONTAL
(IF "GAS") PRODUCTION STORAGE DEEP SHALLOW

LOCATION: ELEVATION 1,150' WATERSHED Piney Fork

DISTRICT Green COUNTY Wetzel

QUADRANGLE Pine Grove 7.5'

SURFACE OWNER Israel Miller Estate ACREAGE 100 Ac.

OIL & GAS ROYALTY OWNER HG Energy, LLC, et al. LEASE ACREAGE 100 Ac.

LEASE NO.

PROPOSED WORK: DRILL ☐ CONVERT ☒ DRILL DEEPER REDRILL ☐ FRACTURE OR
STIMULATE ☒ PLUG OFF OLD FORMATION PERFORATE NEW
FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) Run Tubing & Packer

PLUG AND ABANDON CLEAN OUT AND REPLUG

TARGET FORMATION Gordon ESTIMATED DEPTH 3,260'

WELL OPERATOR HG Energy LLC.

DESIGNATED AGENT

Mike Kirsch

ADDRESS

5260 DuPont Road
Parkersburg, WV 26101

ADDRESS

5260 DuPont Road
Parkersburg, WV 26101

Longitude - 80° 41' 59.8" Latitude - 39° 30' 53.3"

LONGITUDE 80° 40' 00"

9.780'



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

September 18, 2012

WELL WORK PERMIT

Secondary Recovery Well

This permit, API Well Number: 47-10302829, issued to HG ENERGY, LLC, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Please be advised that form WR-35, well operators report of well work, is to be submitted to this office within 90 days of completion of drilling, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.

James Martin
Chief

Operator's Well No: ANTHONY LOVEALL 8

Farm Name: WAYNE, ROBERTA B.

API Well Number: 47-10302829

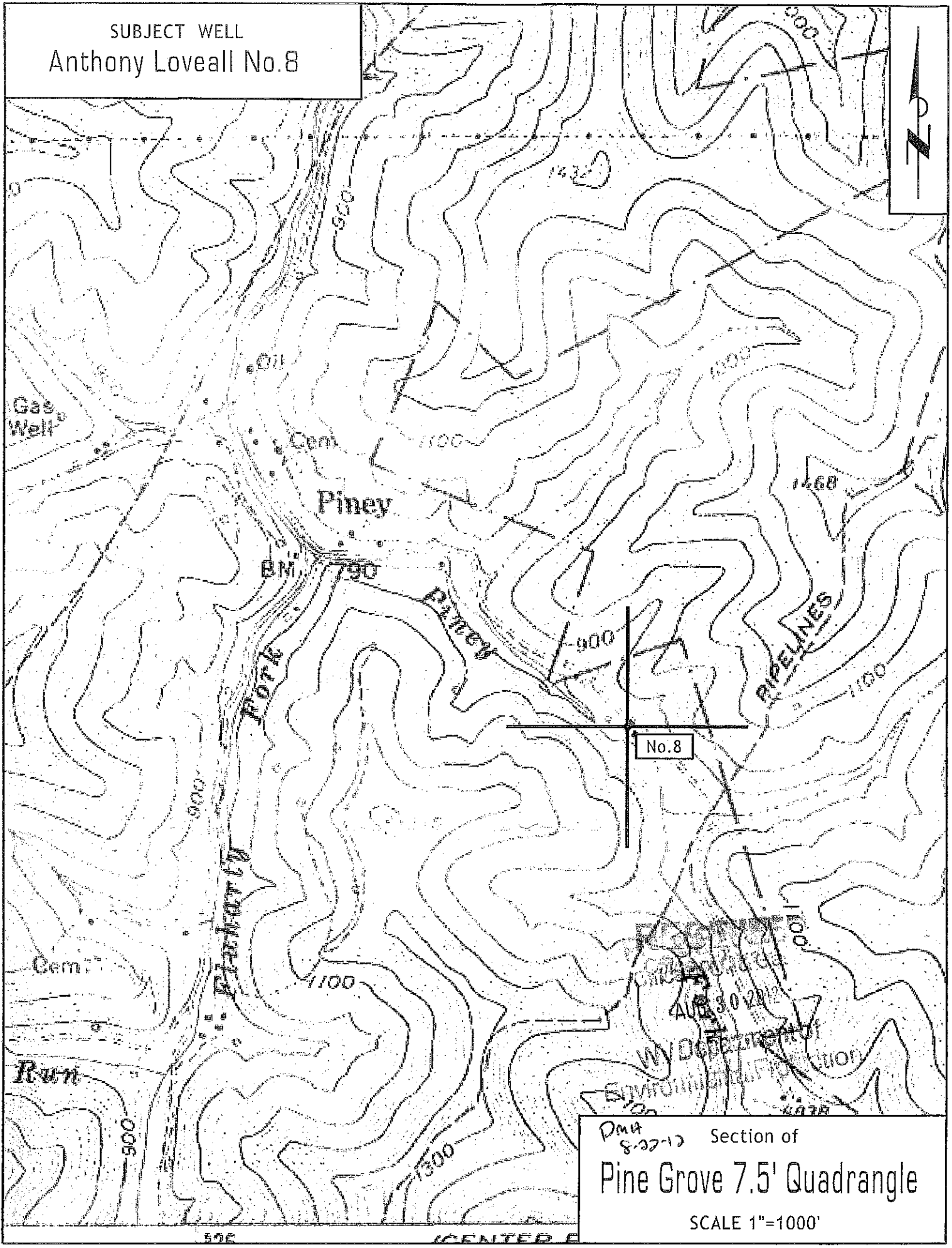
Permit Type: Secondary Recovery Well

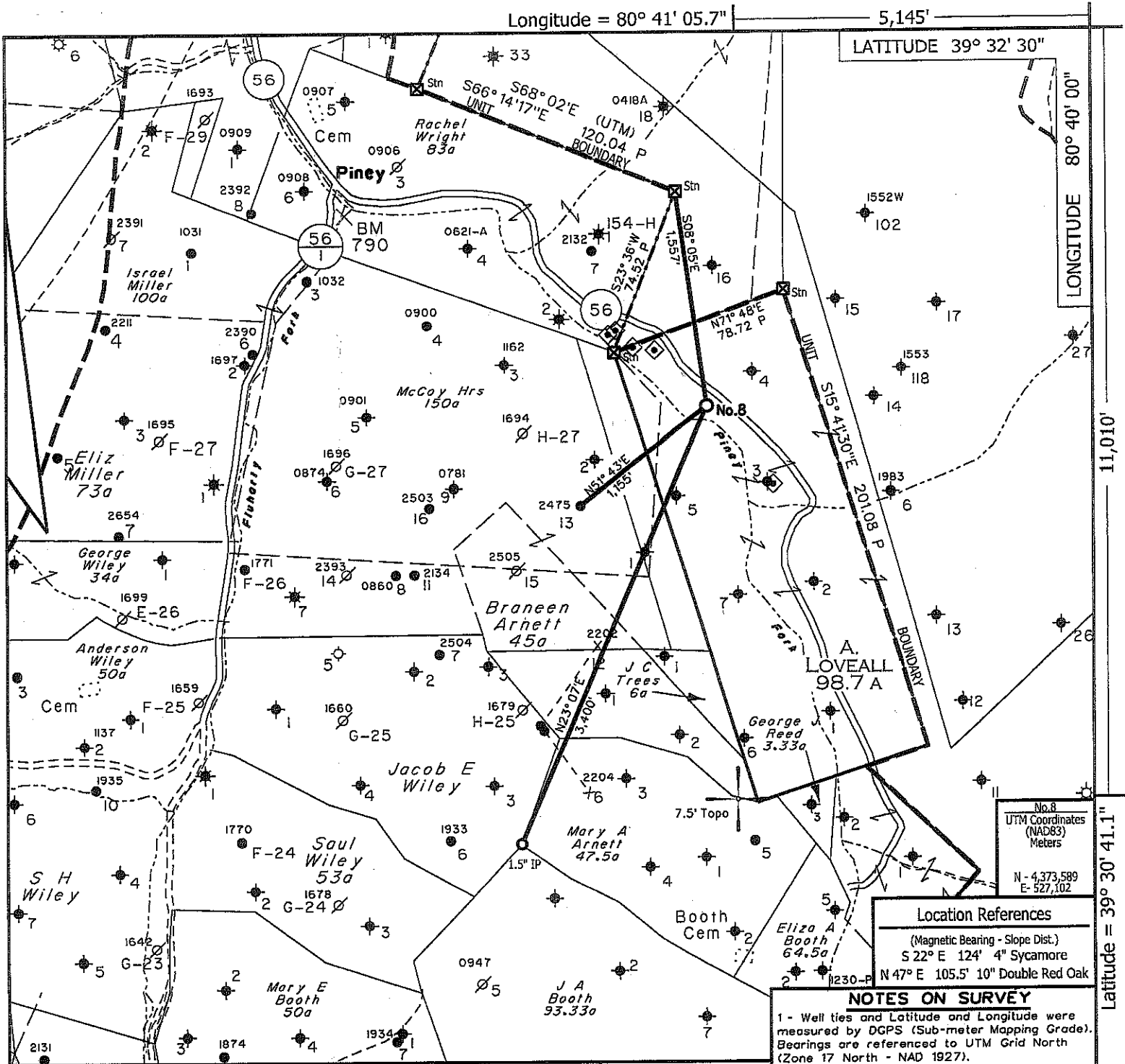
Date Issued: 09/18/2012

Promoting a healthy environment.

105-02829

SUBJECT WELL
Anthony Loveall No.8





FILE NO. 1046-46

MAP NO. N S E W

SCALE 1" = 1000'

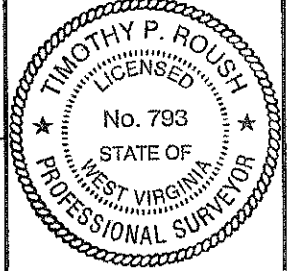
MINIMUM DEGREE OF ACCURACY Sub-Meter

PROVEN SOURCE OF ELEVATION DGPS Survey

(Sub-Meter Mapping Grade)

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF MINES.

(SIGNED) Timothy P. Roush PS 793



WEST VIRGINIA

Division of Environmental Protection
Office of Oil and Gas
601 57th Street
Charleston, West Virginia 25301



DATE June 19, 2012
FARM Anthony Loveall No.8

API WELL NO.
47-103-028295

WELL TYPE: OIL GAS LIQUID INJECTION ☒ WASTE DISPOSAL
(IF "GAS") PRODUCTION STORAGE DEEP SHALLOW

LOCATION: ELEVATION 810' WATERSHED Piney Fork

DISTRICT Green COUNTY Wetzel

QUADRANGLE Pine Grove 7.5'

SURFACE OWNER Roberta B. Wayne ACREAGE 98.7 ac.

OIL & GAS ROYALTY OWNER HG Energy, LLC., et al LEASE ACREAGE 98.7 ac.

LEASE NO. 47244-00

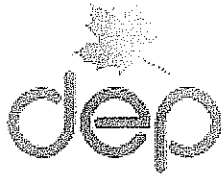
PROPOSED WORK: DRILL ☒ CONVERT DRILL DEEPER REDRILL FRACTURE OR
STIMULATE ☒ PLUG OFF OLD FORMATION PERFORATE NEW
FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY)

PLUG AND ABANDON CLEAN OUT AND REPLUG

TARGET FORMATION Gordon ESTIMATED DEPTH 2,790' MD

WELL OPERATOR HG Energy LLC. DESIGNATED AGENT Mike Kirsch

ADDRESS 5260 DuPont Road Parkersburg, WV 26101 ADDRESS 5260 DuPont Road Parkersburg, WV 26101



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

September 18, 2012

WELL WORK PERMIT

Secondary Recovery Well

This permit, API Well Number: 47-10302830, issued to HG ENERGY, LLC, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Please be advised that form WR-35, well operators report of well work, is to be submitted to this office within 90 days of completion of drilling, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.

James Martin
Chief

Operator's Well No: ANTHONY LOVEALL 9

Farm Name: WAYNE, ROBERTA B.

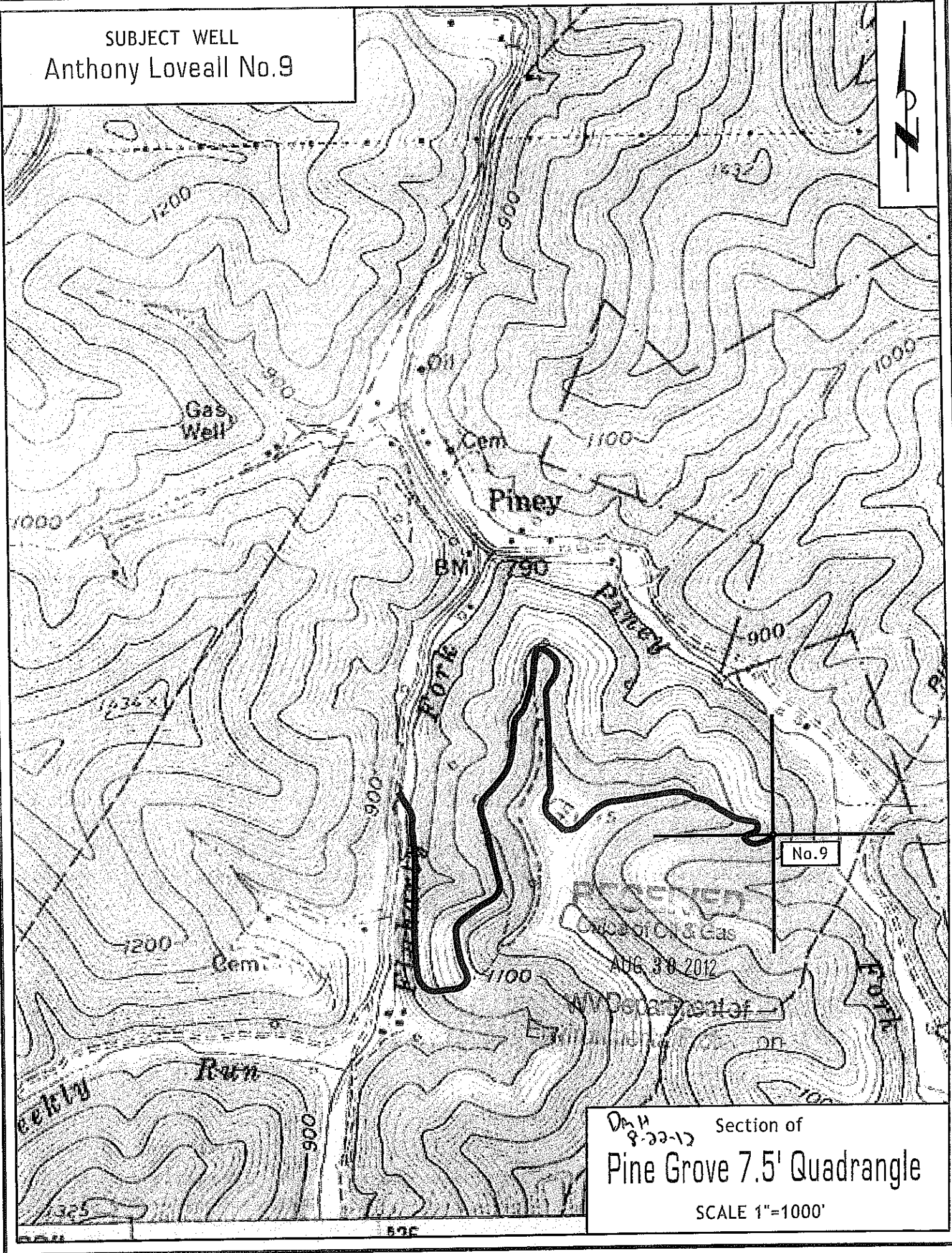
API Well Number: 47-10302830

Permit Type: Secondary Recovery Well

Date Issued: 09/18/2012

Promoting a healthy environment.

SUBJECT WELL
Anthony Loveall No.9



Section of
Pine Grove 7.5' Quadrangle
SCALE 1"=1000'

Longitude = 80° 41' 08.6"

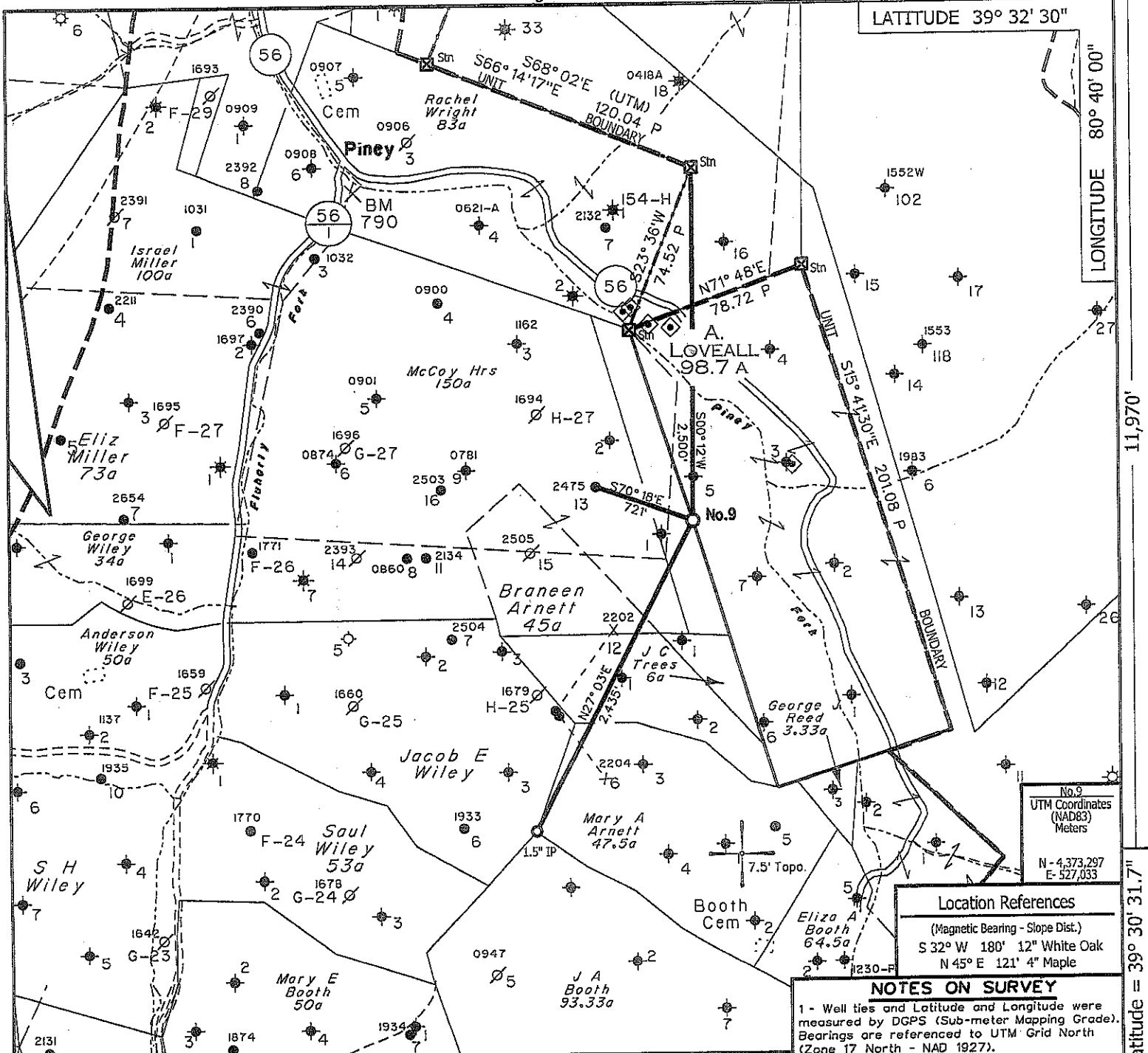
5,375'

LATITUDE 39° 32' 30"

LONGITUDE 80° 40' 00"

11,970'

Latitude = 39° 30' 31.7"



◆ - DENOTES A POSSIBLE WATER SUPPLY SOURCE LOCATED FROM CIRCA 2003 AERIAL PHOTOGRAPHY - NOT BY SURVEY. OTHER SOURCES MAY BE PRESENT.

— - DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

Location References

(Magnetic Bearing - Slope Dist.)
S 32° W 180' 12" White Oak
N 45° E 121' 4" Maple

NOTES ON SURVEY

- 1 - Well ties and Latitude and Longitude were measured by DGPS (Sub-meter Mapping Grade). Bearings are referenced to UTM Grid North (Zone 17 North - NAD 1927).
- 2 - Unit Boundary description from survey of the John Mills property by H.M. Stansberry, PE of Sistersville, WV (1907-08).
- 3 - Surface owner information obtained from the Wetzel County Assessor's tax records.

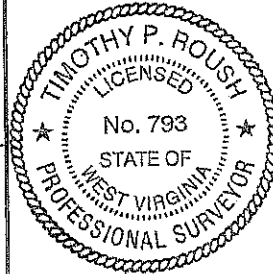
FILE NO. 1046-42
MAP NO. N S E W
SCALE 1" = 1000'
MINIMUM DEGREE OF
ACCURACY Sub-Meter
PROVEN SOURCE OF
ELEVATION DGPS Survey
(Sub-Meter Mapping Grade)

I THE UNDERSIGNED, HEREBY CERTIFY THAT
THIS PLAT IS CORRECT TO THE BEST OF MY
KNOWLEDGE AND BELIEF AND SHOWS ALL THE
INFORMATION REQUIRED BY LAW AND THE REGU-
LATIONS ISSUED AND PRESCRIBED BY THE DEPART-
MENT OF MINES.

(SIGNED)

TIMOTHY P. ROUSH

PS 793



WEST VIRGINIA

Division of Environmental Protection
Office of Oil and Gas
601 57th Street
Charleston, West Virginia 25301



DATE June 12, 2012

FARM Anthony Loveall No.9

API WELL NO.

47-103-02830 S

WELL TYPE: OIL GAS LIQUID INJECTION ☒ WASTE DISPOSAL
(IF "GAS") PRODUCTION STORAGE DEEP SHALLOW
LOCATION: ELEVATION 1,058' WATERSHED Piney Fork
DISTRICT Green COUNTY Wetzel
QUADRANGLE Pine Grove 7.5'

SURFACE OWNER Roberta B. Wayne ACREAGE 98.7 ac.

OIL & GAS ROYALTY OWNER HG Energy, LLC, et al LEASE ACREAGE 98.7 ac.

LEASE NO. 47244-00

PROPOSED WORK: DRILL ☒ CONVERT DRILL DEEPER REDRILL FRACTURE OR
STIMULATE ☒ PLUG OFF OLD FORMATION PERFORATE NEW
FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY)

PLUG AND ABANDON CLEAN OUT AND REPLUG

TARGET FORMATION Gordon ESTIMATED DEPTH 3,040' MD

WELL OPERATOR HG Energy LLC.

DESIGNATED AGENT

Mike Kirsch

ADDRESS

5260 DuPont Road
Parkersburg, WV 26101

ADDRESS

5260 DuPont Road
Parkersburg, WV 26101



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

September 14, 2012

WELL WORK PERMIT

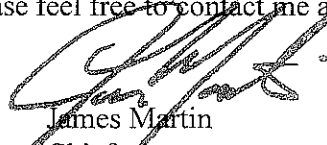
Vertical Well

This permit, API Well Number: 47-9502062, issued to HG ENERGY, LLC, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Please be advised that form WR-35, well operators report of well work, is to be submitted to this office within 90 days of completion of drilling, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.



James Martin
Chief

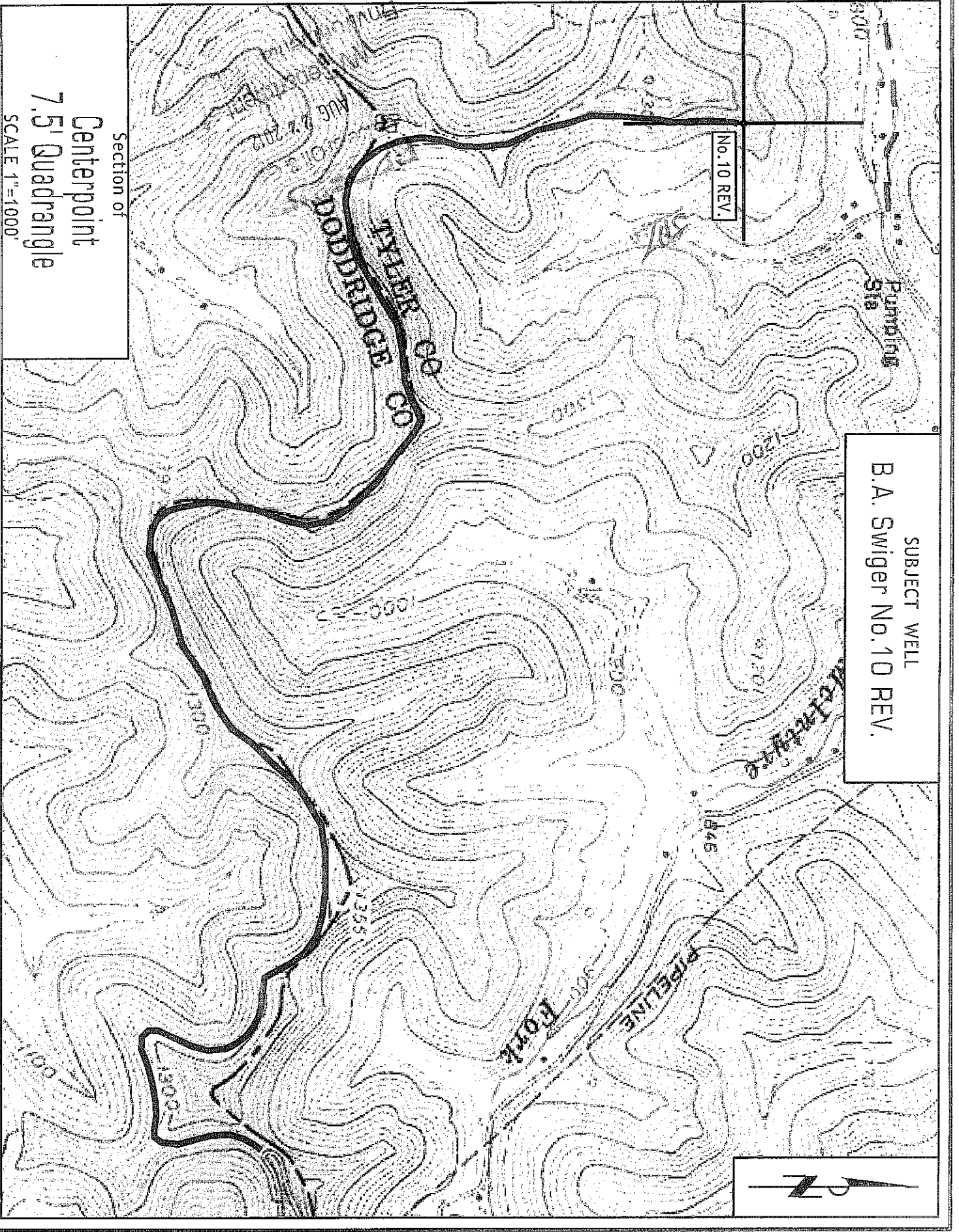
Operator's Well No: B.A. SWIGER 10
Farm Name: LEMASTERS, DAVID W. AND BA
API Well Number: 47-9502062
Permit Type: Vertical Well
Date Issued: 09/14/2012

Promoting a healthy environment.

SUBJECT WELL
B.A. Swiger No.10 REV.

No.10 REV.

Pumping
Site



Section of
Centerpoint
7.5' Quadrangle
SCALE 1"=1000'

95 02062-

Longitude - 80° 42' 22.9"

11,205'

LATITUDE 39° 27' 30"

Call Table

A	S20° W	62 P.
B	S61° 14'E	709.5'
C	N77° 47'E	594.0'
D	N60° 34'E	701.0'
E	N19° W	40 P.

WELL TIES

①	N00° 05'E	2,998'
②	N10° 27'W	3,398'
③	S64° W	41.5'

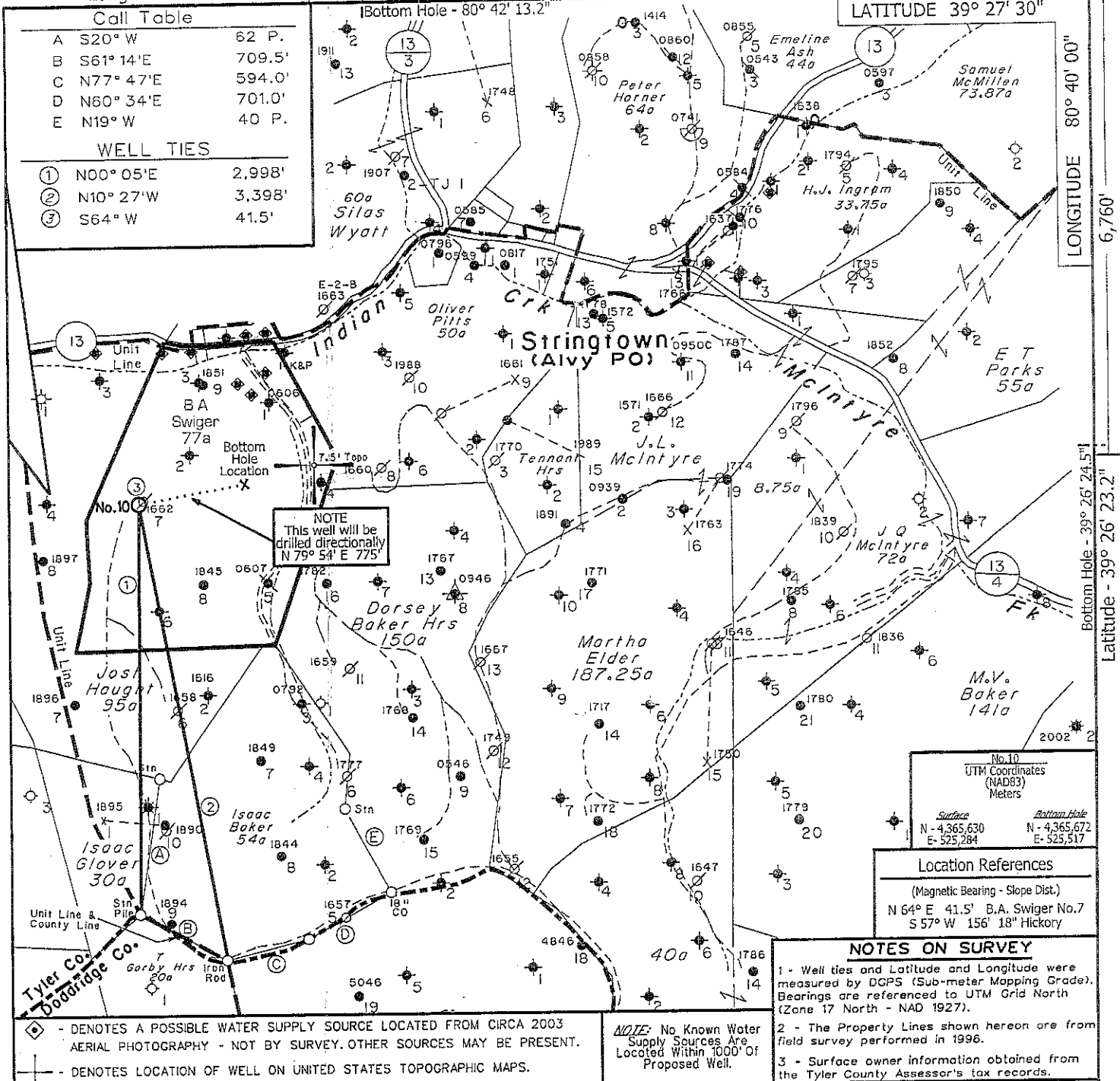
Bottom Hole - 80° 42' 13.2"

LONGITUDE 80° 40' 00"

6,760'

Bottom Hole - 39° 26' 24.5"

Latitude - 39° 26' 23.2"



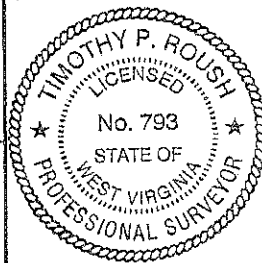
FILE NO. 1046-42
MAP NO. N S E W
SCALE 1" = 1000'
MINIMUM DEGREE OF
ACCURACY Sub-Meter
PROVEN SOURCE OF
ELEVATION DGPS Survey
(Sub-Meter Mapping Grade)

I THE UNDERSIGNED, HEREBY CERTIFY THAT
THIS PLAT IS CORRECT TO THE BEST OF MY
KNOWLEDGE AND BELIEF AND SHOWS ALL THE
INFORMATION REQUIRED BY LAW AND THE REGU-
LATIONS ISSUED AND PRESCRIBED BY THE DEPART-
MENT OF MINES.

(SIGNED)

TIMOTHY P. ROUSH

PS 793



WEST VIRGINIA

Division of Environmental Protection
Office of Oil and Gas
601 57th Street
Charleston, West Virginia 25301



DATE August 6, 2012

FARM B.A. Swiger No.10 REV

API WELL NO.

47-095-02062

WELL TYPE: OIL ☒ GAS ☐ LIQUID INJECTION ☐ WASTE DISPOSAL ☐
(IF "GAS") PRODUCTION ☐ STORAGE ☐ DEEP ☐ SHALLOW ☐

LOCATION: ELEVATION 1,171' WATERSHED Indian Creek

DISTRICT McElroy COUNTY Tyler

QUADRANGLE Centerpoint 7.5'

SURFACE OWNER David W. & Barbara K. Lemasters ACREAGE 85.1 ac.

OIL & GAS ROYALTY OWNER HG Energy, LLC, et al. LEASE ACREAGE 77 ac.

LEASE NO. Fee 883-00

PROPOSED WORK: DRILL ☒ CONVERT ☐ DRILL DEEPER ☐ REDRILL ☐ FRACTURE OR
STIMULATE ☒ PLUG OFF OLD FORMATION ☐ PERFORATE NEW
FORMATION ☐ OTHER PHYSICAL CHANGE IN WELL (SPECIFY)
Well will be drilled directionally N 79° 54' E 775'

PLUG AND ABANDON ☐ CLEAN OUT AND REPLUG ☐ 3,100' TD

TARGET FORMATION Gordon ESTIMATED DEPTH 3,250' MD

WELL OPERATOR HG Energy LLC.

DESIGNATED AGENT

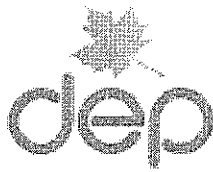
Mike Kirsch

ADDRESS

5260 DuPont Road
Parkersburg, WV 26101

ADDRESS

5260 DuPont Road
Parkersburg, WV 26101



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffinan, Cabinet Secretary
www.dep.wv.gov

September 14, 2012

WELL WORK PERMIT

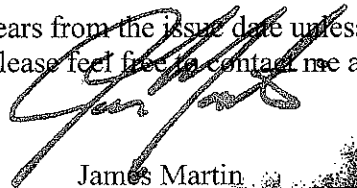
Horizontal 6A Well

This permit, API Well Number: 47-8509970, issued to ANTERO RESOURCES APPALACHIAN CORPORATION, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Please be advised that form WR-35, well operators report of well work, is to be submitted to this office within 90 days of completion of drilling, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

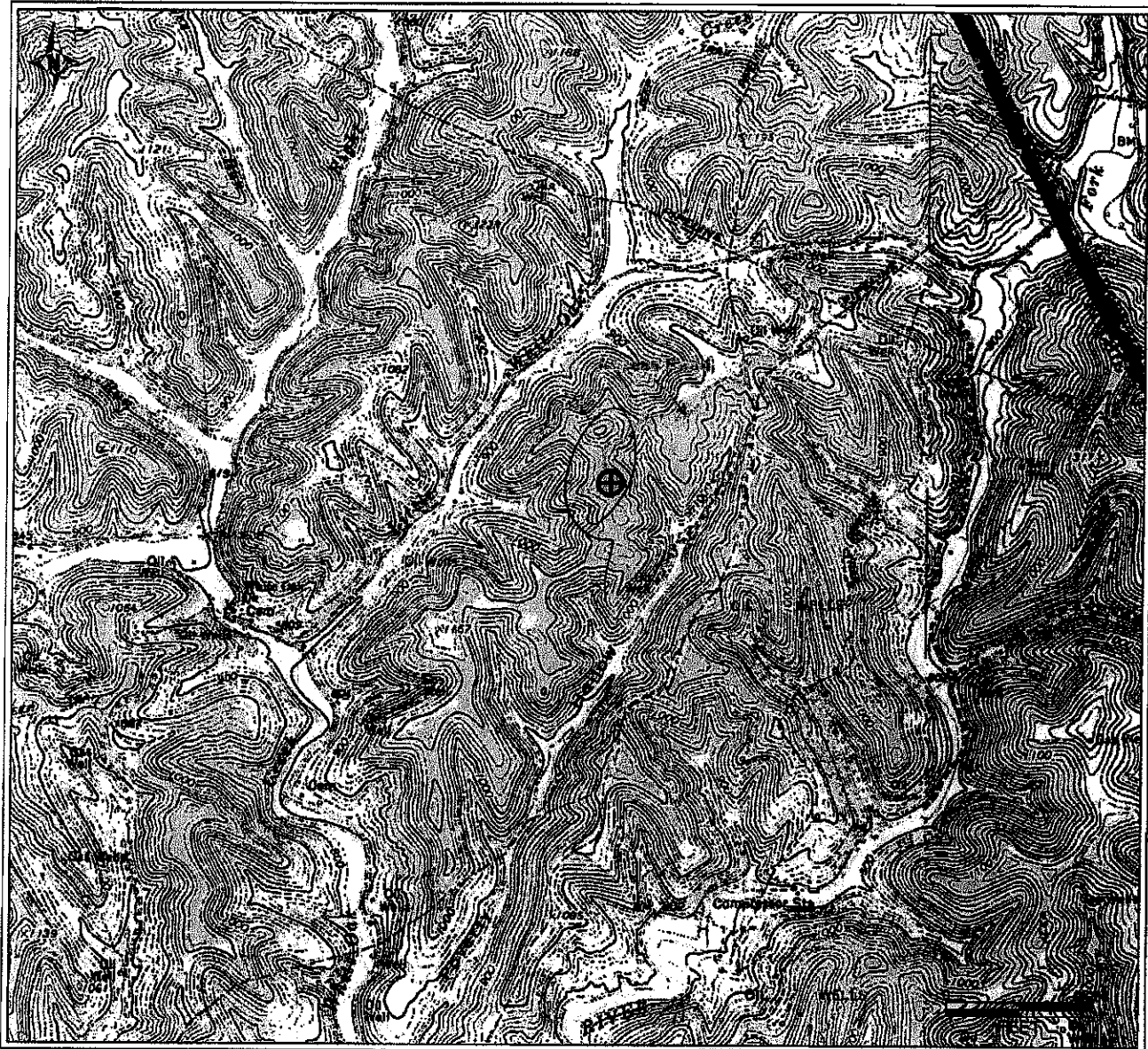
Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.



James Martin
Chief

Operator's Well No: PRUNTY UNIT 1H
Farm Name: O'NEIL FAMILY TRUST ET AL
API Well Number: 47-8509970
Permit Type: Horizontal 6A Well
Date Issued: 09/14/2012

Promoting a healthy environment.



PETRA 5/8/2012 11:44:10 AM

5900
4100

RECEIVED
Office of Oil & Gas
SEP 11 2012
WV Department of
Environmental Protection

Antero Resources Corporation

APPALACHIAN BASIN

**Prunty Unit 1H
Ritchie County**



**REMARKS
QUADRANGLE: PULLMAN
WATERSHED: LITTLE WHITE OAK CREEK
DISTRICT: UNION**

Date: 5/14/2012

*Jul
7-18-12*

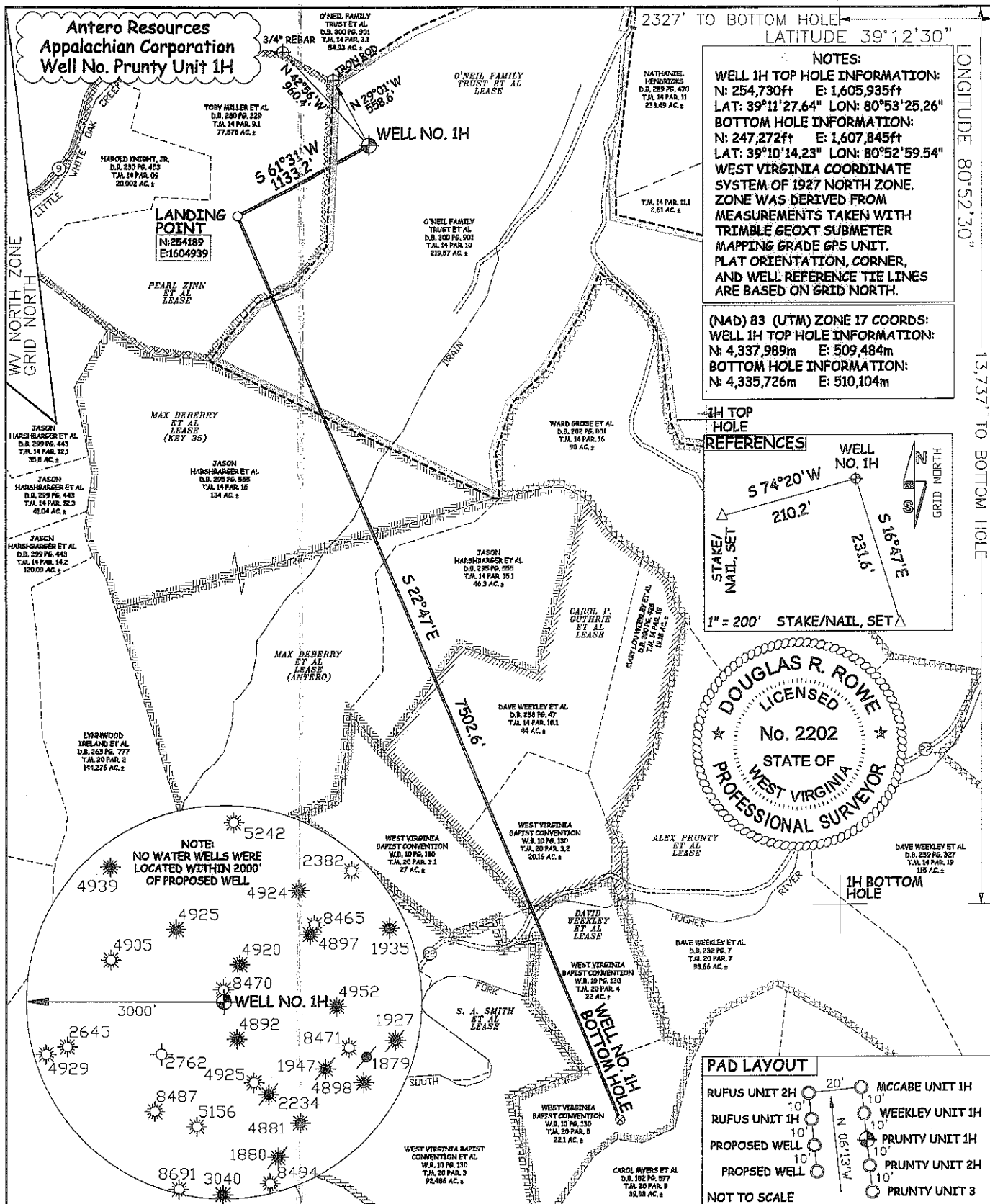
LATITUDE 39°12'30"

4,351'

LATITUDE 39°12'30"

LONGITUDE 80°52'30"

LONGITUDE 80°52'30"

**Antero Resources
Appalachian Corporation
Well No. Prunty Unit 1H**

JOB # 12-030WA

DRAWING # PRUNTYUNIT1H

SCALE 1" = 1000'

MINIMUM DEGREE OF
ACCURACY SUBMETERPROVEN SOURCE OF ELEV.
SUBMETER MAPPING GRADE GPSSTATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY
DIVISION OF OIL AND GASWELL TYPE: OIL GAS ☒ LIQUID INJECTION WASTE DISPOSAL
(IF "GAS") PRODUCTION ☒ STORAGE DEEP SHALLOW ☒
LOCATION: ELEVATION 1,142' WATERSHED LITTLE WHITE OAK CREEK

QUADRANGLE PULLMAN 7.5

SURFACE OWNER O'NEIL FAMILY TRUST ET AL

OIL & GAS ROYALTY OWNER O'NEIL FAMILY TRUST ET AL; PEARL ZINN ET AL; MAX

DEBERRY ET AL (KEY 35); MAX DEBERRY ET AL (ANTERO); CAROL P. GUTHRIE ET AL; DAVID WEEKLEY ET AL 80 ACRES±; 100 ACRES±; 83 ACRES±; 71 ACRES±

PROPOSED WORK: DRILL ☒ CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE ☒PLUG OFF OLD FORMATION PERFORATE NEW FORMATION ☒ OTHER PHYSICAL CHANGE IN WELL

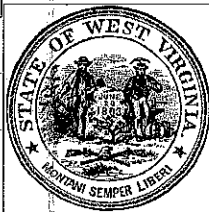
(SPECIFY) PLUG & ABANDON CLEAN OUT & REPLUG

TARGET FORMATION MARCELLUS ESTIMATED DEPTH 7,000' TVD 15,000' MD

WELL OPERATOR ANTERO RESOURCES APPALACHIAN CORP. DESIGNATED AGENT DIANNA STAMPER

ADDRESS 1625 17TH STREET ADDRESS 5400 D BIG TYLER ROAD

FORM WW-6 DENVER, CO 80202 CHARLESTON, WV 25313

STATE OF WEST VIRGINIA, DIVISION
OF ENVIRONMENTAL PROTECTION,
OFFICE OF OIL AND GASWILLOW LAND SURVEYING PLLC
266 HUSHERS RUN RD PENNSBORO
WEST VIRGINIA 26415**LEGEND**----- Surface Owner Boundary Lines +/-
----- Interior Surface Tracts +/-
----- Existing Fence
----- Found monument, as noted

DOUGLAS R. ROWE P.S. 2202

DATE 09/13/12

OPERATOR'S WELL# PRUNTY UNIT #1H

API WELL # 47 - 085

STATE COUNTY PERMIT

COUNTY NAME PERMIT

WELL NO. WV 511389
STATE PLANE COORDINATES
(SOUTH ZONE)

N. 696,623
E. 2,001,735

LAT=(N) 38.91305
LONG=(W) 80.99390

W. G. BENNETT, ET AL LEASE

1,076 ACRES±

WELL NO. WV 511389

BERNICE TALLHAMER
ET AL
100.80 ACRES±

COASTAL LUMBER
COMPANY
160.75 ACRES±

SURFACE LOTS

18" WHITE OAK
N 85°31' W 838.90'
N 67°12' W 1038.65'
N 64°03' E 350.11'
S 35°17' E 276.97'
47-021-2937-P
WELL NO. WV 511389
8" WHITE OAK SNAG

SULL A. McCARTNEY JR.
ET AL
62 ACRES±

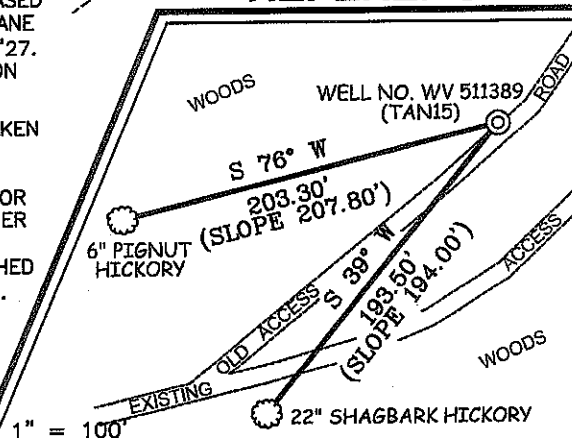
SULL A. McCARTNEY JR.
ET AL
83 ACRES±

BERNICE TALLHAMER
ET AL
25 ACRES±

NOTES ON SURVEY

1. TIES TO WELLS AND CORNERS ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM SOUTH ZONE NAD '27.
2. TIES TO REFERENCES ARE BASED ON MAGNETIC NORTH 03/21/08.
3. LEASE BOUNDARY SHOWN HEREON TAKEN FROM DEED BOOK 271 PAGE 153.
4. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF GILMER COUNTY IN JANUARY, 2008.
5. WELL LAT./LONG. (NAD'27) ESTABLISHED BY DGPS(SUBMETER MAPPING GRADE).

REFERENCES



I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DIVISION OF ENVIRONMENTAL PROTECTION.

P.S.
677



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

DATE MAY 22, 20 08

OPERATORS WELL NO. WV 511389

API WELL NO. 47-021-05591-F
STATE COUNTY PERMIT

CANCELLED

MINIMUM DEGREE OF ACCURACY 1/200
PROVEN SOURCE OF ELEVATION DGPS (SUBMETER MAPPING GRADE)
FILE NO. 6756P511389 (255-37)
SCALE 1" = 800'

STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS



WELL TYPE:	OIL	GAS	X	LIQUID INJECTION	WASTE DISPOSAL	IF "GAS" PRODUCTION	X	STORAGE	DEEP	SHALLOW	X
LOCATION:	ELEVATION 1,122' WATERSHED TRIBUTARY OF LITTLE KANAWHA RIVER										
DISTRICT	DEKALB			COUNTY	GILMER			QUADRANGLE	TANNER 7.5'		
SURFACE OWNER	COASTAL LUMBER COMPANY							ACREAGE	160.75±		
ROYALTY OWNER	HUNTER M. BENNETT, ET AL							LEASE ACREAGE	1076±		
PROPOSED WORK:								LEASE NO.	091283		
DRILL	X	CONVERT		DRILL DEEPER		REDRILL		FRACTURE OR STIMULATE	X	PLUG OFF OLD FORMATION	
PERFORATE NEW FORMATION		PLUG AND ABANDON		CLEAN OUT AND REPLUG		OTHER					
PHYSICAL CHANGE IN WELL (SPECIFY)								TARGET FORMATION			
ESTIMATED DEPTH											
WELL OPERATOR	EQUITABLE PRODUCTION COMPANY							DESIGNATED AGENT	REX C. RAY		
ADDRESS	1710 PENNSYLVANIA AVENUE CHARLESTON, WV 25302							ADDRESS	1710 PENNSYLVANIA AVENUE CHARLESTON, WV 25302		

WELL NO. WV 511387
STATE PLANE COORDINATES
(SOUTH ZONE)N. 695,429
E. 2,000,321LAT=(N) 38.90977
LONG=(W) 80.99887BERNICE TALLHAMER
ET AL
100.80 ACRES±

GODFREY L. CABOT LEASE

65.75 ACRES±

WELL NO. WV 511387

COASTAL LUMBER
COMPANY
160.75 ACRES±

SURFACE LOTS

47-021-2937-P

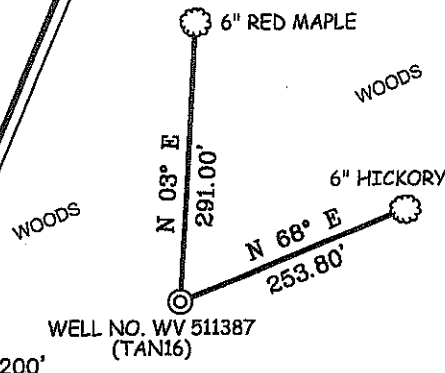
18" WHITE OAK

28" BLACK OAK
W/ HACKS & FENCE
N 32°00' W
493.73'DONALD P.
McCARTNEY
ET AL
62 ACRES±DONALD P.
McCARTNEY ET AL
48 ACRES±
SULL A.
McCARTNEY JR.
28.50 ACRES±DONALD P.
McCARTNEY
ET AL
83 ACRES±DONALD P.
McCARTNEY
ET AL
25 ACRES±

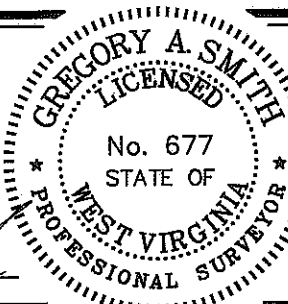
REFERENCES

NOTES ON SURVEY

1. TIES TO WELLS AND CORNERS ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM SOUTH ZONE NAD '27.
2. TIES TO REFERENCES ARE BASED ON MAGNETIC NORTH 04/22/08.
3. LEASE BOUNDARY SHOWN HEREON TAKEN FROM DEED BOOK 13 PAGE 88 & DEED BOOK 447 PAGE 610.
4. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF GILMER COUNTY IN JANUARY, 2008.
5. WELL LAT./LONG. (NAD'27) ESTABLISHED BY DGPS(SUBMETER MAPPING GRADE).



I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DIVISION OF ENVIRONMENTAL PROTECTION.

P.S.
677

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

DATE MAY 27, 20 08

OPERATORS WELL NO. WV 511387

API
WELL NO. 47 - 021 - 05620-F
STATE COUNTY PERMIT**CANCELLED**STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GASMINIMUM DEGREE OF ACCURACY 1 / 200 FILE NO. 6755P511387 (255-63)
PROVEN SOURCE OF ELEVATION DGPS (SUBMETER MAPPING GRADE) SCALE 1" = 800'

WELL TYPE: OIL _____ LIQUID INJECTION _____ WASTE DISPOSAL _____ IF "GAS" PRODUCTION ☒ STORAGE _____ DEEP _____ SHALLOW ☒

LOCATION: ELEVATION 1,042' WATERSHED TRIBUTARY OF LITTLE KANAWHA RIVER
DISTRICT DEKALB COUNTY GILMER QUADRANGLE TANNER 7.5'
SURFACE OWNER DONALD P. McCARTNEY ET AL ACREAGE 83.00±
ROYALTY OWNER CABOT CORP. ET AL LEASE ACREAGE 65.75±
PROPOSED WORK: LEASE NO. 091070
DRILL ☒ CONVERT _____ DRILL DEEPER _____ REDRILL _____ FRACTURE OR STIMULATE ☒ PLUG OFF OLD
FORMATION _____ PERFORATE NEW FORMATION _____ PLUG AND ABANDON _____ CLEAN OUT AND REPLUG _____ OTHER _____
PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION MARCELLUS
ESTIMATED DEPTH _____

WELL OPERATOR EQUITABLE PRODUCTION COMPANY
ADDRESS 1710 PENNSYLVANIA AVENUE
CHARLESTON, WV 25302DESIGNATED AGENT REX C. RAY
ADDRESS 1710 PENNSYLVANIA AVENUE
CHARLESTON, WV 25302



CANCELLED

West Virginia Department of Environmental Protection
Office of Oil and Gas

WELL LOCATION FORM: GPS

API: 47-039-01911-*P* WELL NO.: WV 035050 (7)
FARM NAME: Bedford Land
RESPONSIBLE PARTY NAME: Equitable Production Company
COUNTY: Kanawha DISTRICT: Cabin Creek
QUADRANGLE: Dorothy 7.5'
SURFACE OWNER: Penn Virginia Coal Co. c/o Gary Persinger
ROYALTY OWNER: Penn Virginia Coal Co. c/o Gary Persinger
UTM GPS NORTHING: 4205419
UTM GPS EASTING: 466140 GPS ELEVATION: 515 m (1687ft)

The Responsible Party named above has chosen to submit GPS coordinates in lieu of preparing a new well location plat for a plugging permit or assigned API number on the above well. The Office of Oil and Gas will not accept GPS coordinates that do not meet the following requirements:

1. Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
2. Accuracy to Datum – 3.05 meters
3. Data Collection Method:

Survey grade GPS : Post Processed Differential
Real-Time Differential

Mapping Grade GPS X : Post Processed Differential X
Real-Time Differential

4. Letter size copy of the topography map showing the well location.

I the undersigned, hereby certify this data is correct to the best of my knowledge and belief and shows all the information required by law and the regulations issued and prescribed by the Office of Oil and Gas.

Ben B. Singleton
Signature

4-2-2009
Date

P.S.
Title

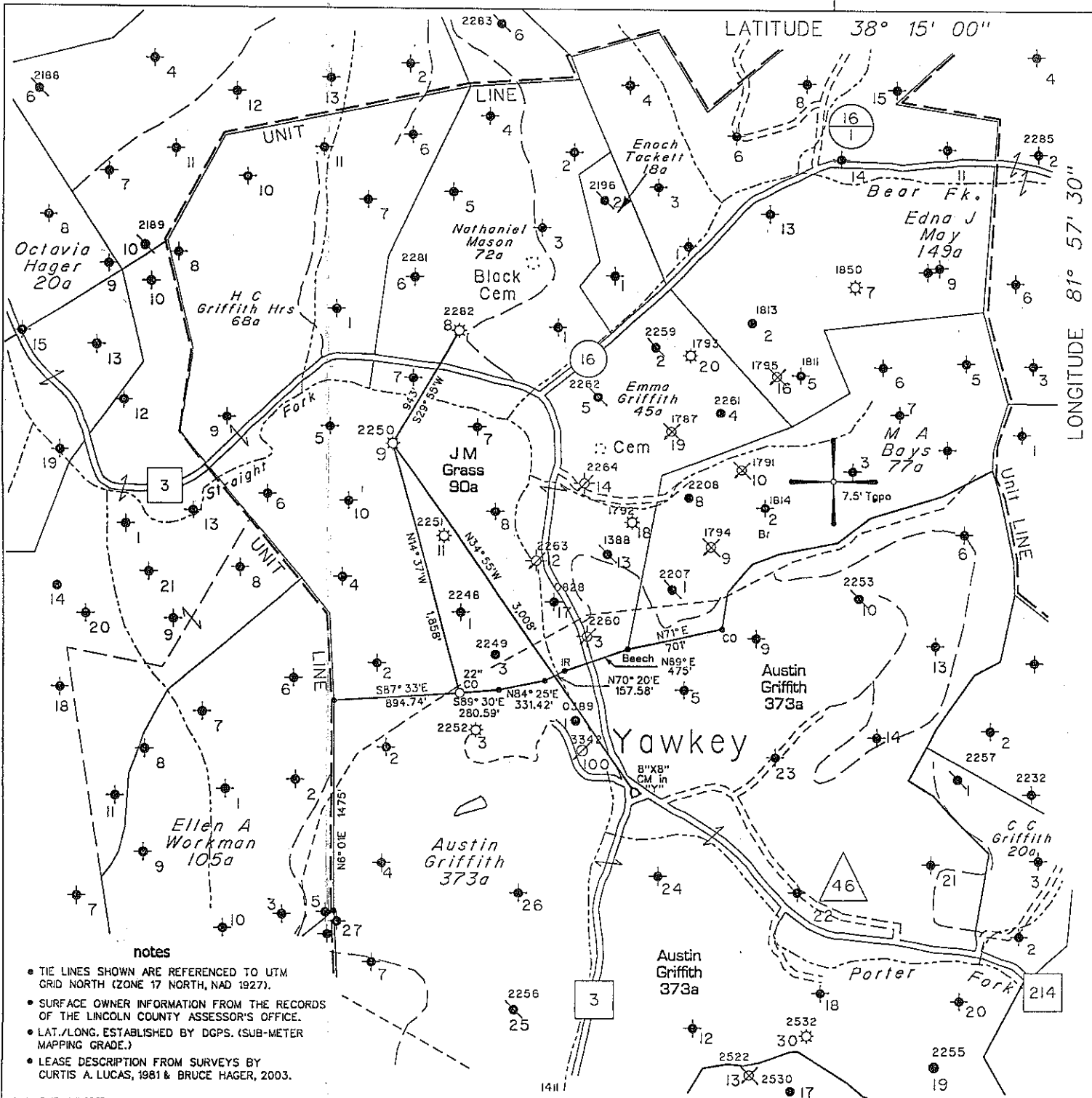
RECEIVED
Office of Oil & Gas

MAR 23 2010

WV Department of
Environmental Protection

Longitude - 81° 58' 17.1"

3,750'



LONGITUDE 81° 57' 30"
Latitude - 38° 13' 53.3"
6,750'

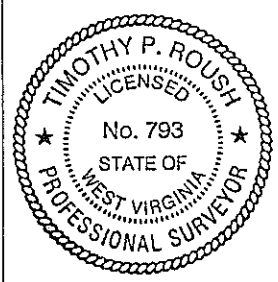
- notes
- TIE LINES SHOWN ARE REFERENCED TO UTM GRID NORTH (ZONE 17 NORTH, NAD 1927).
 - SURFACE OWNER INFORMATION FROM THE RECORDS OF THE LINCOLN COUNTY ASSESSOR'S OFFICE.
 - LAT./LONG. ESTABLISHED BY DGPS. (SUB-METER MAPPING GRADE.)
 - LEASE DESCRIPTION FROM SURVEYS BY CURTIS A. LUCAS, 1981 & BRUCE HAGER, 2003.

(H) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO. _____
DRAWING NO. _____
SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY Sub-Meter
PROVEN SOURCE OF ELEVATION East Resources, Inc.
Company Records

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF MINES.

(SIGNED) *Timothy P. Roush*
TIMOTHY P. ROUSH PS 793



WEST VIRGINIA
Division of Environmental Protection
Office of Oil and Gas
601 57th Street
Charleston, West Virginia 25304



DATE July 2, 2009
FARM J.M. Grass No.9
API WELL NO. 47-043-02250-F

WELL TYPE: OIL ☒ GAS ☒ LIQUID INJECTION _____ WASTE DISPOSAL _____
(IF "GAS") PRODUCTION ☒ STORAGE _____ DEEP _____ SHALLOW ☒
LOCATION: ELEVATION 801.26' WATERSHED Straight Fork
DISTRICT Duval COUNTY Lincoln
QUADRANGLE Griffithsville 7.5'

CANCELLED

SURFACE OWNER Elba O. Bell ACREAGE 45.88 Ac.
OIL & GAS ROYALTY OWNER Lindsey Grass LEASE ACREAGE 90 Ac.
LEASE NO. 71128-50

PROPOSED WORK: DRILL _____ CONVERT _____ DRILL DEEPER _____ REDRILL _____ FRACTURE OR
STIMULATE ☒ PLUG OFF OLD FORMATION _____ PERFORATE NEW
FORMATION _____ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____

PLUG AND ABANDON _____ CLEAN OUT AND REPLUG _____
TARGET FORMATION Marcellus Shale ESTIMATED DEPTH 4,355'
WELL OPERATOR East Resources, Inc. DESIGNATED AGENT Philip S. Ondrusek
ADDRESS P.O. Box 5519 ADDRESS P.O. Box 5519
Vienna, WV 26105 Vienna, WV 26105

FORM IV-6

W.W. McDONALD LAND COMPANY LEASE

8,890.505 ACRES±

WELL NO. WV 512659

47-045-1266-F

47-045-1438

W.W. McDONALD
LAND COMPANY
740.42 ACRES±

47-045-1233

W.W. McDONALD
LAND COMPANY
5,990.47 ACRES±

WELL NO. WV 512659 STATE PLANE COORDINATES SOUTH ZONE (NAD '27)

N. 251,998
E. 1,741,038LAT=(N) 37.68863
LONG=(W) 81.89492UTM (NAD'83)
N. 4,171,657
E. 421,111

EXISTING WELL 47-045-1227 STATE PLANE COORDINATES (SOUTH ZONE)

N. 251,913
E. 1,740,950LAT=(N) 37.68839
LONG=(W) 81.89522WELL NO.
WV 512659W.W. McDONALD
LAND COMPANY
5,990.47 ACRES±

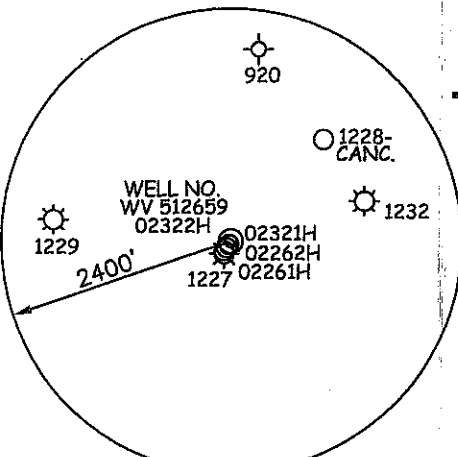
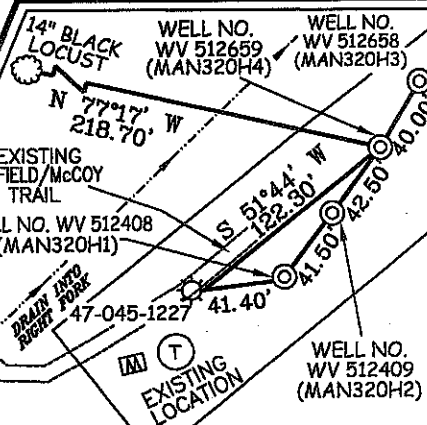
WELL NO. WV 512659 BOTTOM HOLE STATE PLANE COORDINATES SOUTH ZONE (NAD '27)

N. 247,674
E. 1,743,707LAT=(N) 37.67682
LONG=(W) 81.88555UTM (NAD'83)
N. 4,170,340
E. 421,924

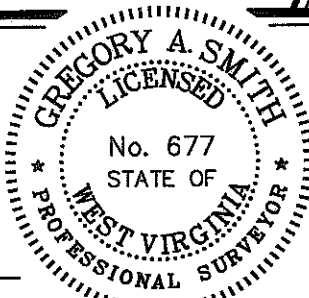
NOTES ON SURVEY

1. TIES TO WELLS AND CORNERS ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM SOUTH ZONE NAD '27.
2. TIES TO REFERENCES ARE BASED ON MAGNETIC NORTH 08/18/09.
3. LEASE BOUNDARY SHOWN HEREON TAKEN FROM A PLAT DATED JANUARY 02, 1997 AS PREPARED BY SLS FOR A.P.I. NO. 47-045-1237.
4. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF LOGAN COUNTY IN JULY, 2009.
5. WELL LAT./LONG. (NAD'27) ESTABLISHED BY DGPS(SUBMETER MAPPING GRADE).
6. ORIGINAL PLAT DATED 09/11/09 REVISED 03/16/10 TO ROTATE & EXTEND HORIZONTAL LEG AND CHANGE BOTTOM HOLE COORDINATES, ETC. REVISED 06/29/10 TO SWITCH TOP HOLE SITE WITH WV 512658.

REFERENCES



I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DIVISION OF ENVIRONMENTAL PROTECTION.

P.S.
677

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

DATE JUNE 29, 2010

OPERATORS WELL NO. WV 512659

API 47-045-02322H
WELL NO. 47-045-02322H
STATE OF WEST VIRGINIA
COUNTY PERMIT

CANCELLED

REVISOR

MINIMUM DEGREE
OF ACCURACY 1/2500

FILE NO. 3850P512659R2 (283-60)

PROVEN SOURCE
OF ELEVATION

DGPS (SUBMETER MAPPING GRADE)

SCALE 1" = 2,000'

STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL IF "GAS" PRODUCTION X STORAGE DEEP SHALLOW X

LOCATION:

ELEVATION 1,432' WATERSHED RIGHT FORK OF SANDLICK CREEK

DISTRICT TRIADDELPHIA COUNTY LOGAN QUADRANGLE MAN 7.5'

SURFACE OWNER W.W. McDONALD LAND COMPANY

ACREAGE 5,990.47±

ROYALTY OWNER W.W. McDONALD LAND COMPANY

LEASE ACREAGE 8,890.505±

PROPOSED WORK:

LEASE NO. 080608

DRILL X CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER

PHYSICAL CHANGE IN WELL (SPECIFY)

TARGET FORMATION LOWER HURON/SILTSTONE

ESTIMATED DEPTH 4,860' (TOTAL VERTICAL DEPTH)

WELL OPERATOR EQT PRODUCTION COMPANY

DESIGNATED AGENT REX C. RAY

ADDRESS 1710 PENNSYLVANIA AVENUE

ADDRESS 1710 PENNSYLVANIA AVENUE

CHARLESTON, WV 25302

CHARLESTON, WV 25302

COUNTY NAME

PERMIT

LATITUDE 37°45'00"

**COLE & CRANE
REAL ESTATE TRUST LEASE
13,292.15 ACRES±
WELL NO. WV 512137**

N. 267,960
E. 1,698,839

LAT=(N) 37.73125
LONG=(W) 82.04136

NOTES ON SURVEY

1. TIES TO WELLS ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM SOUTH ZONE NAD '27.
2. TIES TO REFERENCES ARE BASED ON MAGNETIC NORTH 08/03/09.
3. LEASE BOUNDARY DOES NOT APPEAR WITHIN THE SCOPE OF THIS PLAT.
4. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF LOGAN COUNTY IN JUNE, 2009.
5. WELL LAT./LONG. (NAD'27) ESTABLISHED BY DGPS (SUBMETER MAPPING GRADE).

REFERENCES

N. 265,093
E. 1.701.178

LAT=(N) 37.72345
LONG=(W) 82.03316

THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DIVISION OF ENVIRONMENTAL PROTECTION.

P.S.
677

MINIMUM DEGREE OF ACCURACY 1/2500 FILE NO. 3796P512137 (283-48)
PROVEN SOURCE OF ELEVATION DGPS (SUBMETER MAPPING GRADE) SCALE 1" = 1,000'

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

DATE SEPTEMBER 10 20 09

OPERATORS WELL NO. WV 512137

API
WELL
NO. 47 - 045 - 02323H

STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

WELL TYPE: OIL _____ GAS X LIQUID INJECTION _____ WASTE DISPOSAL _____ IF "GAS" PRODUCTION X STORAGE _____ DEEP _____ SHALLOW X

LOCATION : _____
ELEVATION 1,229' _____
WATERSHED TRIBUTARY OF COW CREEK _____

DISTRICT ISLAND CREEK COUNTY LOGAN QUADRANGLE BARNABUS 7.5'

SURFACE OWNER	COLE & CRANE REAL ESTATE TRUST	ACREAGE	19,801.944±
---------------	--------------------------------	---------	-------------

SURFACE OWNER			
ROYALTY OWNER	COLE & CRANE REAL ESTATE TRUST	LEASE ACREAGE	13,292.15±

PROPOSED WORK : _____ LEASE NO. 80574

DRILL X CONVERT _____ DRILL DEEPER _____ REDRILL _____ FRACTURE OR STIMULATE X PLUG OFF OLD _____

FORMATION_____ PERFORATE NEW FORMATION_____ PLUG AND ABANDON_____ CLEAN OUT AND REPLUG_____ OTHER_____

PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION LOWER HURON

ESTIMATED DEPTH 4,730' (TOTAL VERTICAL DEPTH)

WELL OPERATOR EQT PRODUCTION COMPANY DESIGNATED AGENT REX C. RAY

ADDRESS 1710 PENNSYLVANIA AVENUE ADDRESS 1710 PENNSYLVANIA AVENUE

CHARLESTON, WV 25302

CHARLESTON, WV 25302

LONGITUDE 82°00'00"

COUNTY NAME

PERMIT

NORTH



COUNTY NAME

PERMI

BOTTOM HOLE
WELL NO. WV 512593

**PARDEE & CURTIN
REALTY, LLC
1,742.85 ACRES±**

PARDEE LAND COMPANY LEASE
18,000 ACRES±
WELL NO. WV 512593

BOTTOM HOLE
WELL NO. WV 512593
STATE PLANE COORDINATES
SOUTH ZONE (NAD'27)

N. 293,042
E. 1,794,670

LAT=(N) 37.80262
LONG=(W) 81.71067

UTM (NAD'83)
N. 4,184,166
E. 437,452

WELL NO. WV 512593
STATE PLANE COORDINATES
SOUTH ZONE (NAD'27)

N. 287,290
E. 1,798,659

LAT=(N) 37.78691
LONG=(W) 81.69672

UTM (NAD'83)
N. 4,182,413
E. 438,668

WELL NO.
WV 512593
2325H、

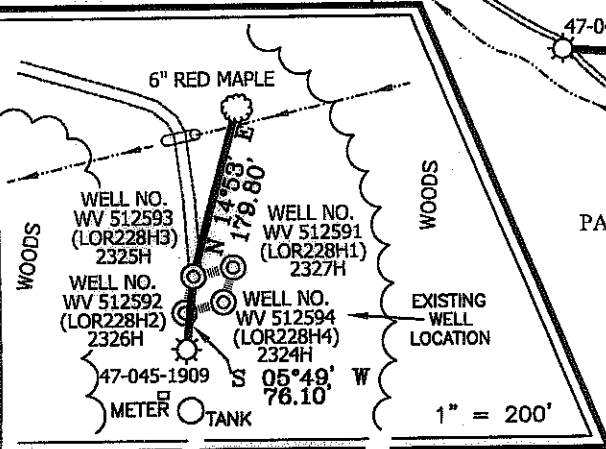
2326H 2327H 2324H
1000

EXISTING WELL
A.P.I. 47-045-1909
STATE PLANE COORDINATES
SOUTH ZONE (NAD'27)

N. 287,214
E. 1.798.662

LAT=(N) 37.78670
LONG=(W) 81.69670

REFERENCES



PARDEE & CURTIN
REALTY, LLC
2,936 ACRES±
(SURFACE)

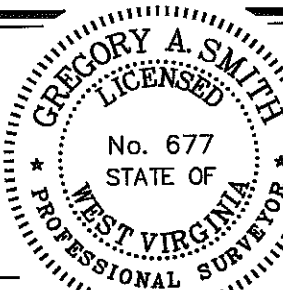
WELL NO.
WV 512593

NOTES ON SURVEY

1. TIES TO WELLS AND CORNERS ARE BASED ON STATE PLANE GRID NORTH WV SOUTH ZONE NAD '27.
2. TIES TO REFERENCES ARE BASED ON MAGNETIC NORTH 08/19/09.
3. LEASE BOUNDARY DOES NOT APPEAR WITHIN THE SCOPE OF THIS PLAT.
4. SURFACE OWNER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF LOGAN COUNTY IN JULY, 2010.
5. WELL LAT./LONG. ESTABLISHED BY DGPS(SUBMETER MAPPING GRADE).
6. ORIGINAL PLAT DATED 09/03/09 REVISED 11/29/10 TO ROTATE & EXTEND HORIZONTAL LEG, CHANGE BOTTOM HOLE COORDINATES & ADD UTM COORDINATES. ETC.

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DIVISION OF ENVIRONMENTAL PROTECTION.

P.S.
677



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

DATE NOVEMBER 29, 20 10

OPERATORS WELL NO. WV 512593

API
WELL NO. 47 - 045 - 02325H

CANCELLED **REVISED**

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 3906P512593R (283-61)
PROVEN SOURCE OF ELEVATION DGPS (SUBMETER MAPPING GRADE) SCALE 1" = 1000'

STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS



WELL TYPE: OIL _____ GAS X LIQUID INJECTION _____ WASTE DISPOSAL _____ IF "GAS" PRODUCTION X STORAGE _____ DEEP _____ SHALLOW X

LOCATION: _____
ELEVATION 1,614' WATERSHED DAVY BRANCH OF BUFFALO CREEK

DISTRICT TRIADELPHIA COUNTY LOGAN QUADRANGLE LORADO 7.5'

SURFACE OWNER PARDEE & CURTIN REALTY, LLC ACREAGE 2,936±

ROYALTY OWNER PARDEE MINERALS, LLC LEASE ACREAGE 18,000±

PROPOSED WORK: _____ LEASE NO. 004107

DRILL X CONVERT _____ DRILL DEEPER _____ REDRILL _____ FRACTURE OR STIMULATE X PLUG OFF OLD
FORMATION _____ PERFORATE NEW FORMATION _____ PLUG AND ABANDON _____ CLEAN OUT AND REPLUG _____ OTHER _____

PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION LOWER HURON/SILTSTONE
ESTIMATED DEPTH 4,870' (TOTAL VERTICAL DEPTH)

WELL OPERATOR EQT PRODUCTION COMPANY
ADDRESS 1710 PENNSYLVANIA AVENUE
CHARLESTON, WV 25302

DESIGNATED AGENT REX C. RAY
ADDRESS 1710 PENNSYLVANIA AVENUE
CHARLESTON, WV 25302

COUNTY NAME

PERMIT

W.W. McDONALD LAND CO. LEASE

8,890.505 ACRES±

WELL NO. WV 512653

McDONALD LAND
COMPANY ET AL
1,040.68 ACRES±

W.W. McDONALD
LAND CO.
5,990.47 ACRES±

BOTTOM HOLE
WELL NO. WV 512653
STATE PLANE COORDINATES
(SOUTH ZONE)

N. 264,454
E. 1,738,234

LAT=(N) 37.72276
LONG=(W) 81.90503

APPROXIMATE END
OF CO. RT. 10/14

WELL NO. WV 512653
STATE PLANE COORDINATES
(SOUTH ZONE)

N. 261,520
E. 1,740,488

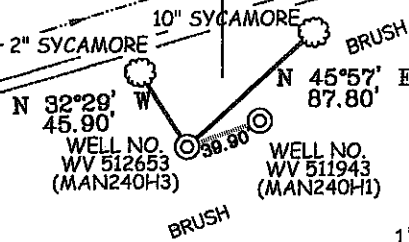
LAT=(N) 37.71476
LONG=(W) 81.89714

NOTES ON SURVEY

1. TIES TO WELLS AND CORNERS ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM SOUTH ZONE NAD '27.
2. TIES TO REFERENCES ARE BASED ON MAGNETIC NORTH 08/18/09.
3. LEASE BOUNDARY SHOWN HEREON TAKEN FROM DEED BOOK 39 PAGE 143.
4. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF LOGAN COUNTY IN JULY, 2009.
5. WELL LAT./LONG. (NAD'27) ESTABLISHED BY DGPS(SUBMETER MAPPING GRADE).

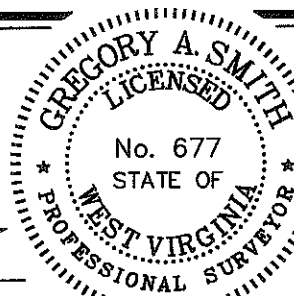
SLS

REFERENCES



I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DIVISION OF ENVIRONMENTAL PROTECTION.

P.S.
677



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

DATE SEPTEMBER 16, 20 09

OPERATORS WELL NO. WV 512653

API WELL NO. 47 - 045 - 0233114
STATE COUNTY PERMIT

CANCELLED

MINIMUM DEGREE OF ACCURACY 1 / 2500
PROVEN SOURCE OF ELEVATION DGPS (SUBMETER MAPPING GRADE)
FILE NO. 3850P512653 (283-59)
SCALE 1" = 2000'

STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

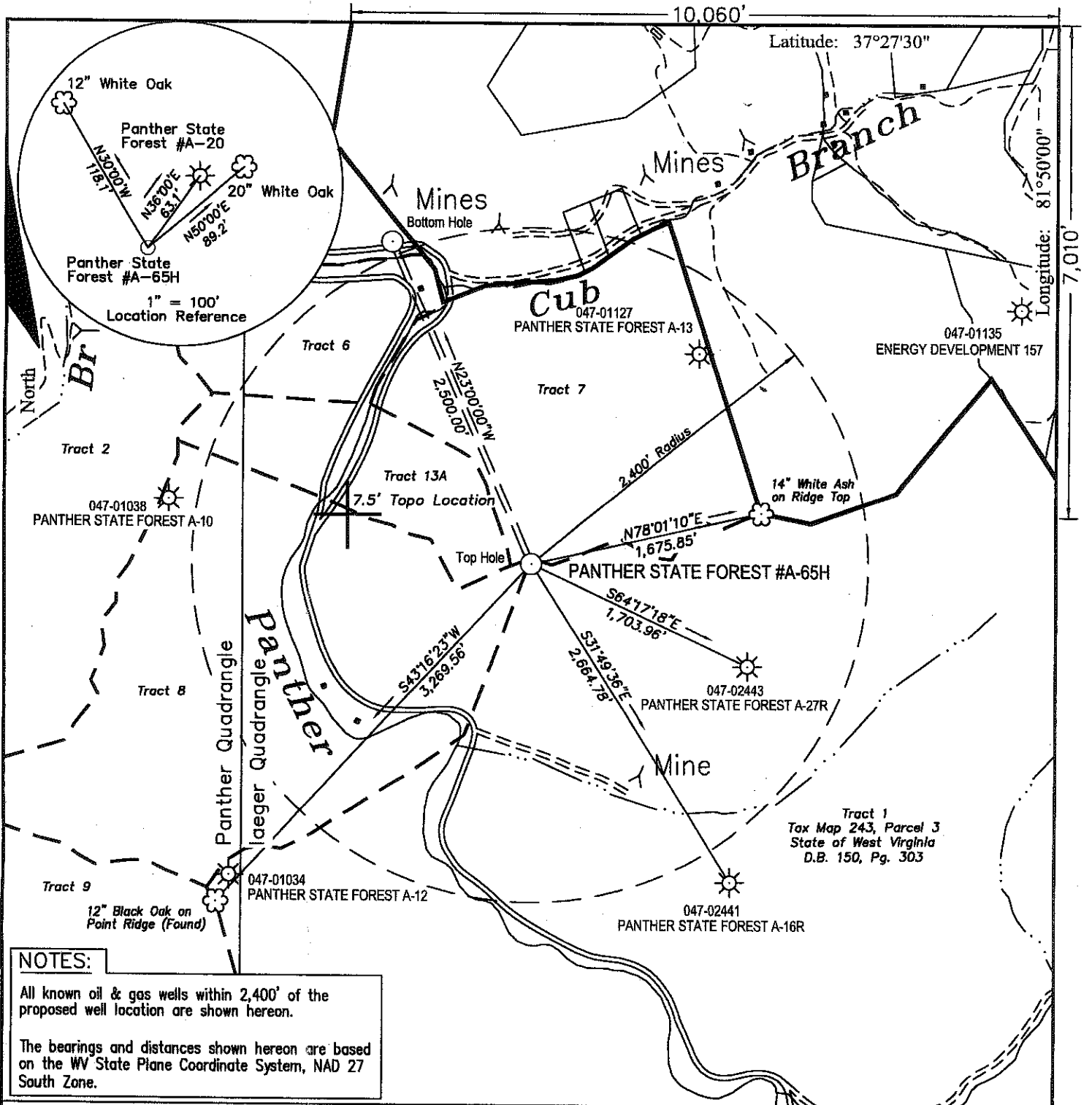


WELL TYPE: OIL	GAS <input checked="" type="checkbox"/>	LIQUID INJECTION	WASTE DISPOSAL	IF "GAS" PRODUCTION <input checked="" type="checkbox"/>	STORAGE	DEEP	SHALLOW <input checked="" type="checkbox"/>
LOCATION: ELEVATION 883' WATERSHED OLDHOUSE BRANCH OF ROCKHOUSE CREEK							
DISTRICT TRIADDELPHIA		COUNTY LOGAN		QUADRANGLE MAN 7.5'			
SURFACE OWNER W.W. McDONALD LAND COMPANY				ACREAGE 5,990.47±			
ROYALTY OWNER W.W. McDONALD LAND COMPANY				LEASE ACREAGE 8,890.505±			
PROPOSED WORK:				LEASE NO. 080608			
DRILL <input checked="" type="checkbox"/>		CONVERT		DRILL DEEPER		REDRILL	
FORMATION		PERFORATE NEW FORMATION		PLUG AND ABANDON		CLEAN OUT AND REPLUG	
OTHER		PHYSICAL CHANGE IN WELL (SPECIFY)		TARGET FORMATION LOWER HURON/SILTSTONE		ESTIMATED DEPTH 4,230' (TOTAL VERTICAL DEPTH)	

WELL OPERATOR EQT PRODUCTION COMPANY
ADDRESS 1710 PENNSYLVANIA AVENUE
CHARLESTON, WV 25302

DESIGNATED AGENT REX C. RAY
ADDRESS 1710 PENNSYLVANIA AVENUE
CHARLESTON, WV 25302

COUNTY NAME PERMIT



NOTES:

All known oil & gas wells within 2,400' of the proposed well location are shown hereon.

The bearings and distances shown hereon are based on the WV State Plane Coordinate System, NAD 27 South Zone.

FILE #:

DRAWING #: PSF A-65H ww6

SCALE: 1" = 1000'

MINIMUM DEGREE OF ACCURACY: 1 : 12,729

PROVEN SOURCE OF ELEVATION: Global Positioning System (GPS)

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIROMENTAL PROTECTION.

Signed: *Don K. Cunningham*

R.P.E.: L.L.S.: 701



PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
WVDEP
OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25304



DATE: August 11, 2008

OPERATOR'S WELL #: Panther State Forest #A-65H

API WELL #: 47 047 02686H

STATE COUNTY PERMIT

CANCELLED

Well Type: ☐ Oil ☐ Waste Disposal ☐ Production ☐ Deep
☒ Gas ☐ Liquid Injection ☐ Storage ☒ Shallow

WATERSHED: Panther Creek of Tug Fork River

ELEVATION: 1,736.95'

COUNTY/DISTRICT: McDowell / Sandy River

QUADRANGLE: Jaeger

SURFACE OWNER: State of West Virginia

ACREAGE: 8,285.20

OIL & GAS ROYALTY OWNER: State of West Virginia

ACREAGE: 7,525

LEASE #: 47-0520 DRILL ☒ CONVERT ☐ DRILL DEEPER ☐ REDRILL ☐ FRACTURE OR STIMULATE ☒
PLUG OFF OLD FORMATION ☐ PERFORATE NEW FORMATION ☐ PLUG & ABANDON ☐
CLEAN OUT & REPLUG ☐ OTHER CHANGE ☐ (SPECIFY):

TARGET FORMATION: BEREA

ESTIMATED DEPTH: 2,000' to 2,200'

WELL OPERATOR Cabot Oil & Gas Corp.

DESIGNATED AGENT Thomas Liberatore

Address P.O. Box 1473

Address P.O. Box 1473

City Charleston

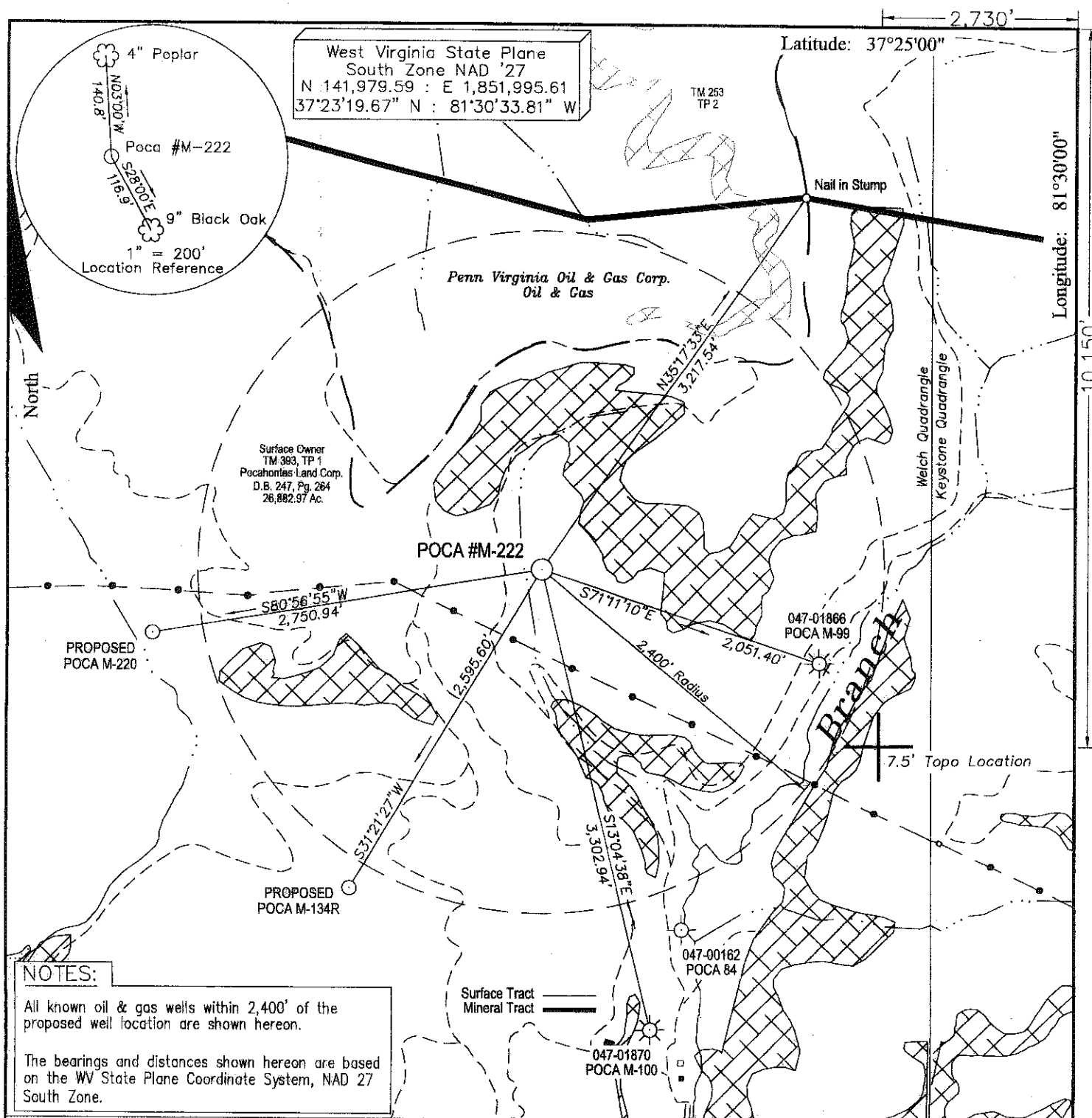
State WV

Zip Code 25325

City Charleston

State WV

Zip Code 25325



LATITUDE 39-30-00

WELL REFERENCES:

N80-00W, 102' TO PIPELINE MARKER
N43-00E, 87' TO 14" BLACK CHERRY

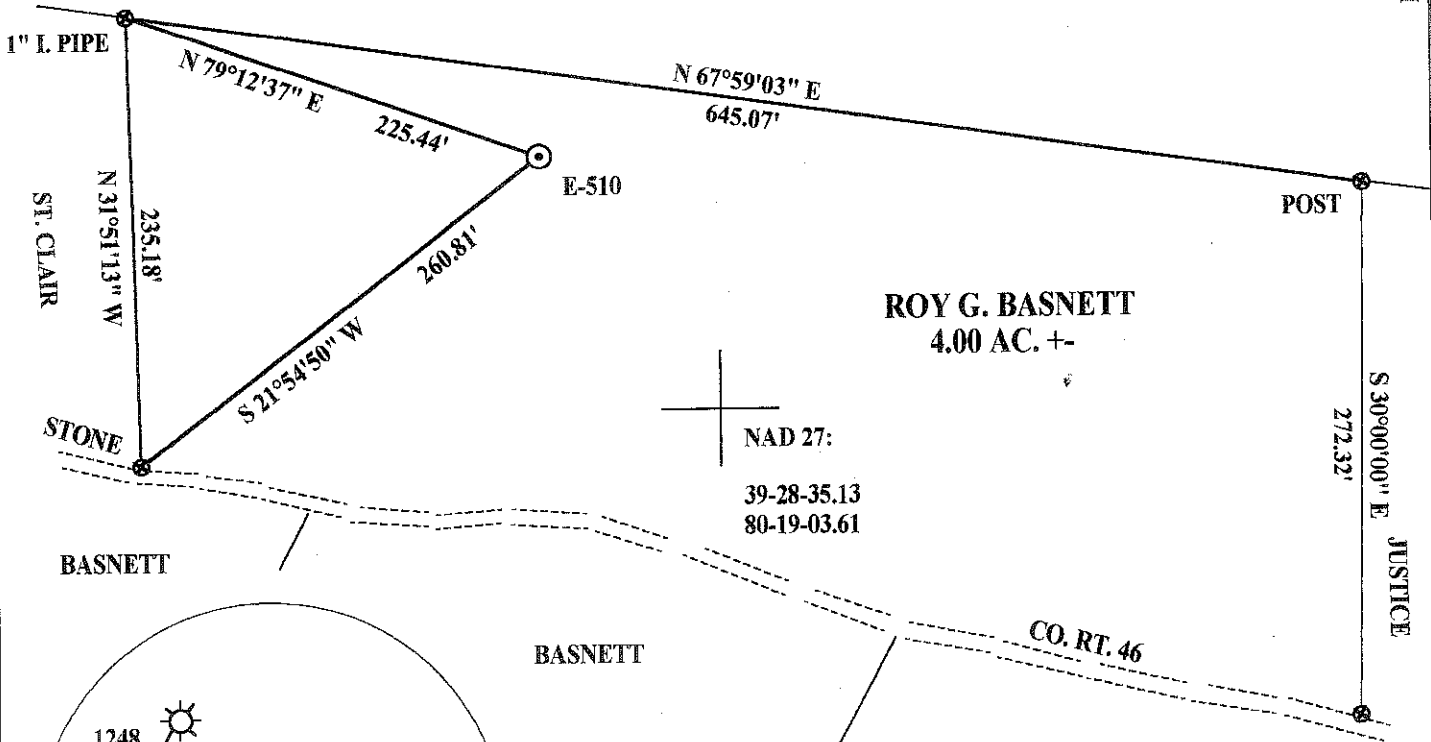
SCALED COOR:

8,520' SOUTH
7,415' WEST

80-17-30

LONGITUDE

CANJAR



ROY G. BASNETT
4.00 AC. +/-

NAD 27:
39-28-35.13
80-19-03.61

NAD 27 WV NORTH SPC:

E-510 = 356,684.19'
1,769,189.48'

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NUMBER: _____
DRAWING NUMBER: EXPBASNETT1.PCS
SCALE: 1" = 100'
MINIMUM DEGREE
OF ACCURACY: 1 IN 200
PROVEN SOURCE
OF ELEVATION: DGPS SURVEY 11/30/00
SUBMETER SYSTEM

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT
TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE
INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND
PRESCRIBED BY THE DEPARTMENT OF ENERGY.

(SIGNED)

STEPHEN D. LOSH, P.S. #674



PLACE SEAL HERE

STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
FORM WW-6 #10 McJUNKIN ROAD
NITRO, WV 25143-2506

LAND SURVEYING SERVICES
21 CEDAR LANE, BRIDGEPORT, WV 26330
PHONE: 304-842-2018 OR 842-5762

DATE: NOVEMBER 30, 2000

OPERATORS WELL NO.: E-510

API WELL NO.

47 - 049 - 01259

STATE COUNTY PERMIT

CANCELLED

LOCATION: ELEVATION 1159.11' WATERSHED TEVEBAUGH RUN

DISTRICT LINCOLN COUNTY MARION

QUADRANGLE SHINNSTON

LEASE NUMBER 4492

ACREAGE 4.00

LEASE ACREAGE 34

SURFACE OWNER ROY G. BASNETT

OIL & GAS ROYALTY OWNER ROY G. BASNETT

PROPOSED WORK: DRILL ☒ CONVERT ☐ DRILL DEEPER ☐ REDRILL ☐ FRACTURE OR STIMULATE ☐ PLUG OFF OLD FORMATION

PERFORATE NEW FORMATION ☐ OTHER PHYSICAL CHANGE (SPECIFY) _____

PLUG & ABANDON ☐ CLEAN OUT & REPLUG ☐

TARGET FORMATION BALLTOWN

ESTIMATED DEPTH 3950'

WELL OPERATOR EXPLORATION PARTNERS, LLC

DESIGNATED AGENT LOUIS FERRARI

ADDRESS P. O. BOX 930 BRIDGEPORT, WV 26330

ADDRESS P. O. BOX 930 BRIDGEPORT, WV 26330

COUNTY NAME PERMIT

LONG: 81° 54' 55.9"
DECIMAL: 81.91554

11570'

LATITUDE 38° 50' 00"

JACK L. PICKENS LEASE 57.5 AC.± PICKENS #1

K. FAUVER
13.14 ACRES±
SURFACE

PROPOSED WELL
STATE PLANE NAD 27
COORDINATES
N) 668649
E) 1739186

FAY FAUVER
4.71 ACRES±
SURFACE

SEE SURVEY NOTE

BY R. S. RICHMOND SURVEY
N 06°13'30"E

HIGH TENSION

JACK L. PICKENS
57.5 ACRES±
SURFACE

POWERLINE

PICKENS
NO. 1

S 62°08' W
192.0'
CONCRETE
RIGHT-OF-WAY
MARKER

S 28°46' W
198.0'
CONCRETE
MONUMENT

RUNS WITH DRAIN

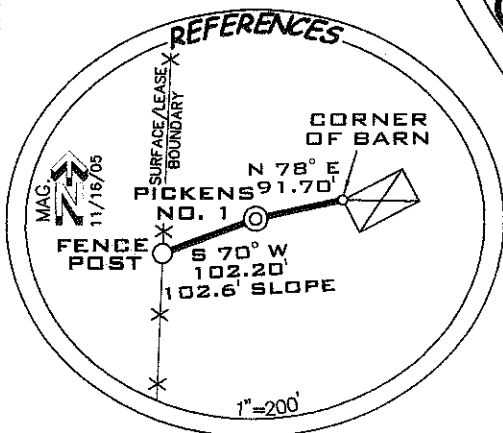
W.D. DEVAULT
40 ACRES±
SURFACE

STATE
ROUTE 87

LONGITUDE 81° 52' 30"

SURVEYED LAT. 38° 49' 57.7"
DECIMAL: 38.83270

WV SOUTH ZONE
GRID NORTH



REFERENCE NOTES

LEASE AS SHOWN TAKEN FROM
DB 302/55

OWNERSHIP TAKEN FROM PUBLIC
RECORDS OF MASON COUNTY,
WV IN NOVEMBER, 2005.

LAT./LONG. BY DIFFERENTIAL
SUBMETER MAPPING GRADE GPS

SURVEY NOTE

REFERENCE A SURVEY DATED
11/07/86, BY R. S. RICHMOND
L.S.#713 FOR KERMIT AND WENDELL
FAUVER, RECORDED IN SLIDE 17-B.

NO KNOWN PERMITTED
WELLS WITHIN 2400 FEET
2400'
PICKENS NO. 1

(+DENOTES LOCATION ON UNITED STATES TOPOGRAPHIC MAPS)

FILE NUMBER 050190
DRAWING NUMBER WP1(W6-02)

SCALE 1"=300'

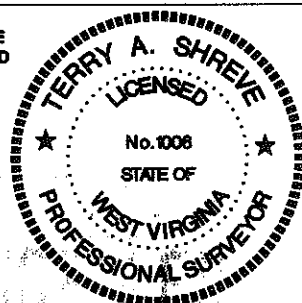
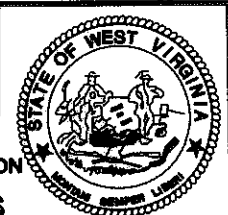
MINIMUM DEGREE
OF ACCURACY 1/200

PROVEN SOURCE
OF ELEVATION MAPPING GRADE GPS

I THE UNDERSIGNED HEREBY CERTIFY THAT THIS PLAT IS CORRECT
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INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND
PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION

P.S.
1006

Terry A. Shreve



STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

DATE: NOVEMBER 29, 2005

OPERATORS WELL NO. PICKENS NO. 1

API WELL NO.

47-053-00431
STATE COUNTY PERMIT

CANCELLED

WELL TYPE: OIL GAS ☒ LIQUID INJECTION WASTE DISPOSAL
(IF "GAS") PRODUCTION ☒ STORAGE DEEP SHALLOW ☒

LOCATION ELEVATION 912' WATERSHED LITTLE MILL CREEK

DISTRICT COLOGNE COUNTY MASON

QUADRANGLE MOUNT ALTO 7.5' LEASE NUMBER

SURFACE OWNER JACK L. PICKENS ET.UX.

ACREAGE 57.5 AC ±

OIL & GAS ROYALTY OWNER JACK L. PICKENS ET.UX.

LEASE ACREAGE 57.5±

PROPOSED WORK: DRILL ☒ CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE ☒ PLUG OFF OLD FORMATION
PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE (SPECIFY)

PLUG & ABANDON CLEAN OUT & REPLUG

TARGET FORMATION SHALE

ESTIMATED DEPTH 4138'

WELL OPERATOR ASCENT RESOURCES WV, INC. DESIGNATED AGENT R. NEAL PIERCE

ADDRESS 1700 REDBUD BLVD, SUITE 450, MCKINNEY, TX 75069 ADDRESS P.O. BOX 1791, CHARLESTON, WV 25326

COUNTY NAME PERMIT

LATITUDE 38°22' 30"

TRATI

LONGITUDE 80°52' 30"

AT 38 338833' - 13,200' -

**BRECKINRIDGE
LANDS LLC
520 ACRES±**

WELL OPERATOR	<u>CABOT OIL & GAS CORP.</u>	DESIGNATED AGENT	<u>THOMAS S. LIBERATORE</u>
ADDRESS	<u>900 LEE STREET EAST</u> <u>SUITE 1500 CHARLESTON, WV 25301</u>	ADDRESS	<u>900 LEE STREET EAST</u> <u>SUITE 1500 CHARLESTON, WV 25301</u>

1997 4/20/2010

3,780'
LATITUDE 38° 27' 30"

LONGITUDE 80° 42' 30"

PARDEE LEASE 18,600 ACRES± WELL NO. TIOGA #7

PARDEE & CURTIN REALTY, LLC
12,404.2 ACRES±

CONCRETE MONUMENT

N 66°54' W
1399.23'

TIOGA NO. 7

N 50°35' E
1595.44'

NOTES ON SURVEY

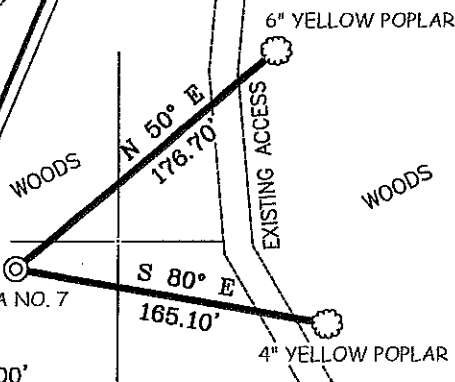
1. TIES TO WELLS AND CORNERS ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM SOUTH ZONE NAD '27.
2. TIES TO REFERENCES ARE BASED ON MAGNETIC NORTH 08/13/08.
3. LEASE BOUNDARY SHOWN HEREON TAKEN FROM DEED BOOK 42 AT PAGE 264.
4. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF NICHOLAS COUNTY IN JULY, 2008.
5. WELL LAT./LONG. (NAD'27) ESTABLISHED BY DGPS(SUBMETER MAPPING GRADE).

REFERENCES

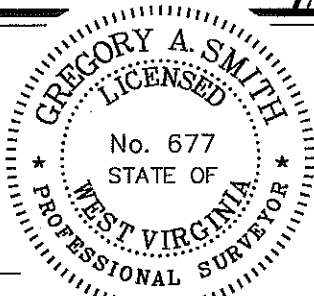
SOUTHEASTERN GAS CO.
NO. B25-PLUGGED (NO A.P.I.)

WELL NO. 7

3000'

WELL NO. 7
STATE PLANE COORDINATES
(SOUTH ZONE)(N) 516,345
(E) 2,079,783LAT=(N) 38.41770
LONG=(W) 80.72154

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DIVISION OF ENVIRONMENTAL PROTECTION.

P.S.
677

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

DATE SEPTEMBER 11, 20 08

OPERATORS WELL NO. TIOGA #7

API WELL NO. 47 - 67 - 009-11
STATE COUNTY PERMITMINIMUM DEGREE
OF ACCURACY

1 / 2500

FILE NO. 5769P7R (259-32)

SCALE 1" = 500'

PROVEN SOURCE
OF ELEVATION

DGPS (SUBMETER MAPPING GRADE)

STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

WELL TYPE: OIL ☐ GAS ☒ LIQUID INJECTION ☐ WASTE DISPOSAL ☐ IF "GAS" PRODUCTION ☒ STORAGE ☐ DEEP ☒ SHALLOW ☐

LOCATION: ELEVATION 2,464' WATERSHED CLEAR FORK
DISTRICT HAMILTON COUNTY NICHOLAS QUADRANGLE TIOGA 7.5'
SURFACE OWNER PARDEE & CURTIN REALTY, LLC ACREAGE 12,404.2±
ROYALTY OWNER PARDEE MINERALS, LLC LEASE ACREAGE 18,600±
PROPOSED WORK: LEASE NO. 47-12427
DRILL ☒ CONVERT ☐ DRILL DEEPER ☐ REDRILL ☐ FRACTURE OR STIMULATE ☒ PLUG OFF OLD
FORMATION ☐ PERFORATE NEW FORMATION ☐ PLUG AND ABANDON ☐ CLEAN OUT AND REPLUG ☐ OTHER ☐
PHYSICAL CHANGE IN WELL (SPECIFY) TARGET FORMATION MARCELLUS
ESTIMATED DEPTH 7551'

WELL OPERATOR CABOT OIL & GAS CORP.

DESIGNATED AGENT THOMAS S. LIBERATORE

ADDRESS 900 LEE STREET EAST, SUITE 1500
CHARLESTON, WV 25301ADDRESS 900 LEE STREET EAST, SUITE 1500
CHARLESTON, WV 25301

COUNTY NAME

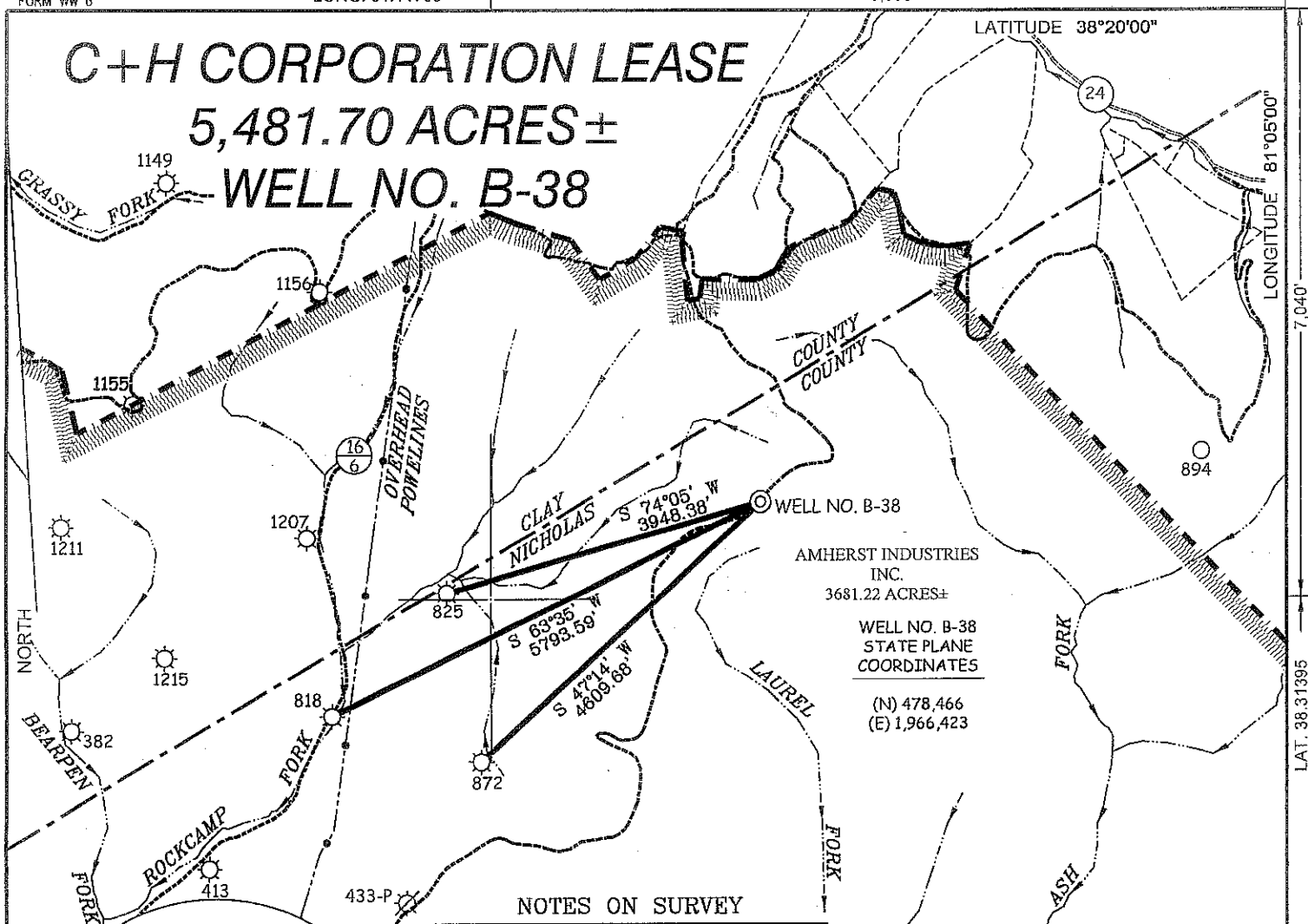
PERMIT

OK
9A

C+H CORPORATION LEASE

5,481.70 ACRES±

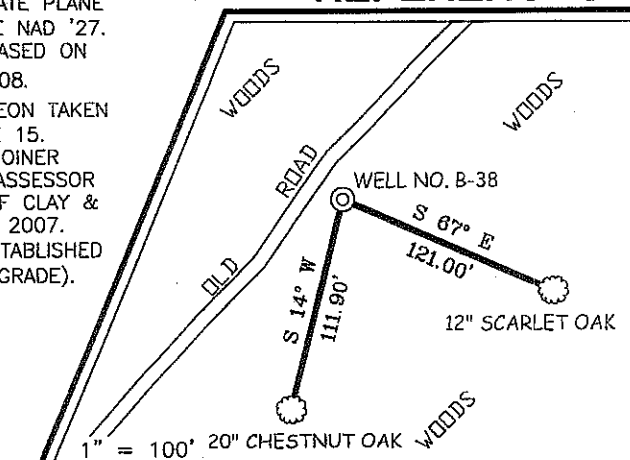
WELL NO. B-38



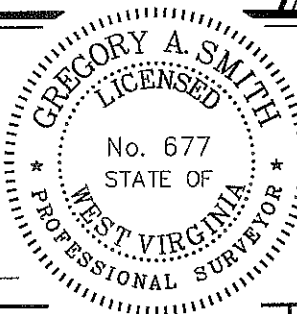
NOTES ON SURVEY

1. TIES TO WELLS AND CORNERS ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM SOUTH ZONE NAD '27.
2. TIES TO REFERENCES ARE BASED ON MAGNETIC NORTH 04-18-08.
3. LEASE BOUNDARY SHOWN HEREON TAKEN FROM DEED BOOK 82 PAGE 15.
4. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF CLAY & NICHOLAS COUNTIES IN JULY, 2007.
5. WELL LAT./LONG. (NAD'27) ESTABLISHED BY DGPS(SUBMETER MAPPING GRADE).

REFERENCES



I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DIVISION OF ENVIRONMENTAL PROTECTION.

P.S.
677*Gregory A. Smith*

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

DATE APRIL 23, 20 08

OPERATORS WELL NO. B-38

API WELL NO. 47 - 67 - 00914
STATE COUNTY PERMIT**CANCELLED**

MINIMUM DEGREE OF ACCURACY 1 / 2500
PROVEN SOURCE OF ELEVATION DGPS (SUBMETER MAPPING GRADE)
FILE NO. 5664PB-38(256-44)
SCALE 1" = 2,000'

STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS



WELL TYPE: OIL _____ GAS ☒ INJECTION _____ WASTE DISPOSAL _____ IF "GAS" PRODUCTION ☒ STORAGE _____ DEEP ☒ SHALLOW _____

LOCATION:

ELEVATION 1,660' WATERSHED ROCKCAMP FORK & LAUREL FORK

DISTRICT JEFFERSON COUNTY NICHOLAS QUADRANGLE LOCKWOOD 7.5'

SURFACE OWNER AMHERST INDUSTRIES INC.

ACREAGE 3681.22±

ROYALTY OWNER C+H CORPORATION

LEASE ACREAGE 5,481.70±

PROPOSED WORK:

LEASE NO. _____

DRILL ☒ CONVERT _____ DRILL DEEPER _____ REDRILL _____ FRACTURE OR STIMULATE ☒ PLUG OFF OLD

FORMATION _____ PERFORATE NEW FORMATION _____ PLUG AND ABANDON _____ CLEAN OUT AND REPLUG _____ OTHER _____

PHYSICAL CHANGE IN WELL (SPECIFY) _____

TARGET FORMATION **BIG LIME, KEEFER, INJUN DEV. SHALES, MARCELLUS**
ESTIMATED DEPTH 7,000'

WELL OPERATOR CABOT OIL & GAS, CORP.

DESIGNATED AGENT THOMAS S. LIBERATORE

ADDRESS 900 LEE STREET EAST, SUITE 1500

ADDRESS 900 LEE STREET EAST, SUITE 1500

CHARLESTON, WV 25301

CHARLESTON, WV 25301

COUNTY NAME

PERMIT

24 5/23/2008